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A N
E S S A Y

Towards a more Easie and Safe
Method of Cure
IN THE
S M A L L P O X.

Founded upon EXPERIMENTS,
AND
A Review of Dr. Sydenham's Works.

To which is prefix'd so much of the
AUTHOR'S OWN CASE as relates to
this Present Tract.

By WALTER LTNN, M. B.

*Non fingendum, aut excogitandum,
Sed inveniendum quid Natura faciat aut ferat.*
Bacon.

L O N D O N :

Printed for R. KNAPLOCK at the Bishop's
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Review of Dr. J. G. ...

To which is added a list of the ...

THE ...

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L. O. W. D. O. W.

Printed for



THE PREFACE.



WORK of this Nature, which bears the Appearance of Novelty in a Science, has the greater need of a Preface, not only to demonstrate the Necessity, at least Usefulness of it, but to shew the Method and Design of the Author, and what the Reader may or may not expect from it.

For the first of these I believe it will be on all Hands agreed, that an Improvement in any part of Physick may be of general Use and Benefit to Mankind: And likewise, whoever looks but back upon these late Years past, will find that this particular Distemper of the Small Pox, or the Methods of Curing it, have as much occasion to be examin'd into, as any other whatsoever. Which was so apparent, especially in London, about three or four Years since, viz. in 1710. that many Complaints were then made of the Destructiveness of it, and

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the great want of better Help, Care, or Advice therein.

An Author who appeared, I think, towards the latter end of that Year, but whose Title I have forgot, and therefore cannot give so good an Account of him, has given some Reasons for that Calamity; which he has not imputed wholly to any peculiar Malignity in the Air at that time, but to a Defect in some of the great Physicians; who being too fully employ'd could not give due Attendance to all, or even to any of their Patients thro' the Multiplicity of them: For want of which, and the Severity of their Injunctions, which hindred others from applying any thing in their Absence, many Persons were lost, who might otherwise (in his Opinion) have been sav'd with due Care. This was one of his Arguments, and some others there were of the same nature, which seem'd calculated principally for that Time, and for the Places of London and Westminster chiefly; and tho' they might have some Force then, yet were not so general, as to give us the Causes of those Misfortunes that have happened at other Times, and in other Places besides that of London. And upon a strict Enquiry, and a Comparison likewise of what has happened in the Country, we shall find, the chief and main Cause has been but slightly touch'd upon. For if we take a Review of Sydenham (that great Author to whom we are indebted for a large Part of what we at present know of the Nature of this Distemper, and its proper Method

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Method of Cure) we may not only discover what is the main Cause of our Misfortunes herein, but be directed something towards a Remedy for them; tho' it must be the Work of Time, Industry and Experience, to compleat that which I here only profess my self to begin. But not to amuse my Reader, and to lead him into false Notions of my Design.

We find that celebrated Author (after he has given us a fair and satisfactory Account of this Distemper in several Parts of his Works) using these Words, 'I have taken the more time in treating of these things, because I am very well satisfied, that an happy or lamentable End of the Disease chiefly (if not wholly) depends upon the Management of the Patient in the beginning.

And this he often hints at and inculcates to us, so that it may pass as an established Notion, not only of his, but now of every Person of real Skill and Understanding in the Distemper. Let us unhappy are we in general in this Point, as not to have it in our Power, or our Will, to make choice of a Physician when he may be most serviceable to us, but suffer our selves to be managed by those, who have the least Skill, Caution or Experience in the Distemper, at a time when we have the most Occasion for the greatest. And this Sydenham complains of as a very dangerous Evil, pag. 96. but which he has not given us any adequate Remedy for, and which it will be worth the Pains to search out.

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For now the Mischief, I believe, will appear to be even worse than in his Days: for we are not only relapsed into the same Error he complains of, viz. of frequently using too high Cordials in the beginning, which was almost the single Fault of those Times; but now there is scarce a Family but has some one in it, or at least a Friend or small Retainer to it, who pretends to an entire Skill in this Distemper; and to know every thing that is necessary in the Management of it, especially in the beginning. And this is done by certain Maxims, taken up (as they think) upon good Ground. For Example, One that has read Sydenham, finding him make use of Bleeding, or recommending it sometimes for cooling the over-heated Blood, fancies that it ought never to be omitted before the Eruption of the Small Pox. Another, because Vomiting has been sometimes used by Persons of very good Skill, thinks that the Distemper can never proceed well if this be omitted. A third, who has read perhaps that Passage of Sydenham at the bottom of Page 275. thinks that a gentle Purge for qualifying the Humours, may be of considerable Service. A fourth is for high Cordials always, because forsooth he has seen them have a good Effect sometimes. A fifth is for Blisters; and, a sixth (perhaps not more wise than any of them) come what will come, and let the Symptoms be never so urgent, is for doing nothing at all, and thinks he has the best Advice for his Opinion. But all these are commonly erroneous. The first,

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first, for doing things they scarce know upon what Design, nor what will be their future Event (tho' 'tis odds that it will be mischievous in most of them) and the last, for neglecting such things as may be necessary, both for the Patient's present Relief, and future Benefit. Now tho' the Remedy or Advice Sydenham has offer'd in this Matter, seems chiefly to discourage or discountenance all such ignorant Pretenders to a Profession which they never studied; yet it has had this Effect only, that it has made some of them perhaps a little more industrious in the Vocation they would employ themselves in. So that by adding a little Reading (especially of this our Author) to their Number of Receipts, they pretend to an equal, if not a superiour Skill, in this Distemper, to that of the best and most regular Practitioners. Now Matters being thus, 'tis in vain to tell them any more that they know nothing of what they so much pretend to; but 'tis even necessary (if we would gain a Belief) to show them and convince them of something that they really do not know, and which nevertheless they should be acquainted with, if they would discharge their Duties in preserving the Lives of those they undertake the Care of.

The whole Design of this Treatise then is, first, to teach them something more of the Nature of this Distemper, and after to point out such easie, and at the same time, proper and powerful Methods, as
may

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may be more effectual than those commonly in Vogue; and which yet shall be much more safe and innocent in case of Failure in their Intent or Design, than those other which have been just now mentioned. Which two Things are the most materially to be regarded, either in this, or in any other Case of Physick.

I would not have it thought, when I make use of Sydenham's Authority in this Work, that I slight all others Sentiments and Opinions. We have besides several other Authors who have written excellently well upon the Subject, especially Morton; whose Improvements in the Therapeutick Part of this Distemper are highly to be valued. And tho' he differs from Sydenham in several Points, yet they are reconcilable most of them by such a Medium as the Reader will find I have us'd towards the latter Half of this Work; which tho' it was not begun with that View, yet may very well have such an Effect as a Reconciliation, it answering the Intentions of both these Authors, so far at least as it extends, viz. to the first Stage of the Distemper only, the safe bringing out of the Small Pox: A Work difficult enough in the Judgment of both these great Men; tho' not perhaps in the Opinion of the Vulgar, for whose Use this is principally intended. And tho' the first Part of it may seem as if I designed to be abstruse, yet no Treatise of Physick, I believe, is really more plain and intelligible,
espe-

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especially towards the latter Part of it, at least upon a second Perusal and a due Observance of those Quotations I have all along made from Sydenham's Works. The Edition I made use of is the English one, printed 1712. with which I find the other English ones correspond, at least as to the Pages.

There is one Word in my Title-Page, which perhaps I ought here to explain; and that is, what I mean by Experiments, which are not upon the Saliva, Blood, Bile, or other Juices of the Sick, viz. by Microscopical Observations upon them, a Chymical Analysis, or the mixing of certain Liquors with them, and then observing the various Changes they undergo, either in their Consistence, Colour, or other Qualities. We have had a great many of these things done already, and more have been promis'd, but with little apparent Advantage to Physick in general, or the Art of curing any one Disease in particular. But those Experiments I mean here (and which are most useful) are such Extraordinary Accidents as have happen'd in any Distemper; and of which it is worth the while to observe the good and bad Event, and then to draw such plain Reasons and Consequences from them as may be of use for knowing the true Nature of a Disease, in relation to what it will or will not bear in its Cure, that so we may go in a more direct and certain Method to it.

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This Sydenham has done in several Passages of his Works ; and particularly in this Distemper has recorded several Accidents, either of his own Knowledge or of others Relation, which were good Confirmations both of his Theory and Practice therein. And if this were done oftner, I am persuaded we should not be at a loss to know the true Genius of almost every Distemper : For Chance very often puts those things into our Hands, which neither the deepest Learning, Study or Labour could ever have arriv'd at, or have been thought of, as proper in a Disease. And this was so well known, not only to the Ancients, but to our excellent Sydenham, that he declares very often, That at least one half of the Art of Physick is purely Emperical and Irrational. Nay, we are beholden to brute (a) Animals for several Helps in it, if we can believe the Ancients, or the Author of the History of Physick.

And tho' the Experiments I bring, were made by rational Creatures, and perhaps by Persons of good Sense, yet they were not by Physicians for the most part, nor by such as either could or did draw any Consequences from them. 'Tis upon one of these casual and unheeded Experiments that I have endeavour'd to found a new Method (amongst other things) for preserving the Face in this Distemper ; which is so much better than any other, that 'tis

(a) Mr. Le Clark.

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highly useful for saving the Life too, which some have often hazarded for the sake of the former.

This new Method, tho' founded upon Experience, and proved safe enough to all Intents and Purposes in its Consequences, yet, I do not expect that it should be received and please every one at first: For it would be no less than a Miracle if it should, especially in such a Degeneracy in this Part of Learning, viz. Experimental Philosophy and Physick, and even Aversion for all Improvements that way: which is even worse than what Sydenham complain'd of. Yet some have, and will approve of it. And since it is capable of great Improvements, I hope it may be thought both proper and acceptable to the Publick. And to their Censures (whether partial or impartial) I submit it, with what other Notions I have here expos'd to their Judgment; satisfy'd, at least in my own Designs and Intentions, in doing it, whatever the Consequences or Event shall be.

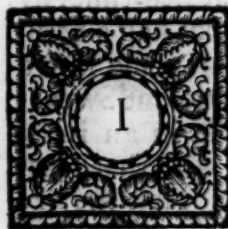
ERRA.

ERRATA.

PAGE 28. Line 14. read *this*.
Pag. 49. lin. 23. read *seem d*.
Pag. 50. lin. 28. read *over-restraining*.
Pag. 76, lin. 35. read *Apurexia*.



A N
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O N T H E
Small Pox.



HAVE prefix'd my own Case in this Work, and should make some Apology for it perhaps, especially it being so imperfect as it is, but can give no better Reason than that, this being once Matter of the greatest Consequence to me, as well as having some Things singular in it, it gave Rise to those other Thoughts, Enquiries or Speculations, that follow upon the Subject, and so naturally claims a Place here.

THE principal Matters of Fact therefore of my own Case, so far as they relate to this present Tract, were as follows.

C A S E I.

ON the 18th of *May* 1710, in the Evening, I was taken with a Pain in my Loins, which I took to be

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a Rheumatism: but being not very violent, I enter'd upon no Course with it that Night. The next Day I drank Whey for it, which is a Remedy (a) Sydenham has advis'd. The third Day I renew'd it, adding a little Rhubarb to it in Mastication, or Chewing, which made it work better, and it seem'd to give me some little Relief: but I had at the same time an Eruption of my Distemper upon my Lips only, as had been observ'd by one Person in the House where I lodg'd, to which I impute the small Ease I had, rather than to the Operation of my Purge, tho' it might be the Effect of both.

IN the Afternoon of this third Day, I was taken with a shivering Fit, and afterwards with a short Vomiting, which my Apothecary observing, advis'd me to take a Vomit: which I was persuaded to: and it worked pretty well and easily. After which I took a Cordial and Anodine, just at Bed-time, by his Advice too; in which there was put half a Scruple of the Gascoin Powder. This threw me into a Sleep, and at the same time a most violent Sweat: during which the Small Pox broke out in an innumerable Quantity all over me; and with that Heat and Thirst attending it, that I have not felt the like either before or since. As soon as it was Day I arose, and drawing my self some small Beer, drank a large Quantity of it, which cool'd and refresh'd me, so that I recover'd to almost a perfect good Temper; and slept sound for two Hours after, not in my Bed, but in a Chair.

AS soon as I knew my Distemper, which I did not till this Morning my Apothecary informed me, I sent for Dr. *Johnson*, the most noted Physician in *York*, (which was the place of my Abode at that time) and put my self under his Care. And tho' I

was attended with all the Diligence and Skill too that I believe my Distemper required, yet (bating the two first Days after the Eruption, during which time I was perfectly easy, and free from a Fever, Pain, Sickness, &c. especially upon the second Day till the Evening) I ran almost a perpetual Hazard of my Life, meerly by the violence of the Symptoms of my Distemper, which seeming not conquerable by the Art of Physick; I was at last given over by my Physician. The whole Progress of my Distemper, and my Recovery out of it, seems difficult for me to relate: And I would not put Dr. Johnson, nor any other Person that attended me in my Sickness, upon it; it being not so material for this Work I am now upon; for which Reasons I have omitted it: but there are some Things I shall take notice of, which will shew the Violence of it. For (besides my long Blindness, my Eyes being clos'd for near a Month, and my Confinement still longer, and at last being oblig'd to go abroad, with my Face half covered with a Crust and Scurf, upon the Account of a Consumption which I shall relate hereafter) there were two things which were remarkable, one of them more especially. The first was, that when I begun to sleep well a Nights, in the Morning I had such a Weakness in that side on which I lay, that I was wholly unable to stir or move without Assistance, and then with the greatest Pain, as if my Shoulder or some other Part of me had been broke, which would go off after a time; and the next Morning I should be liable to the same again, but perhaps on the other side, if I lay on it; and so I think for three Days: which I found to be not a Soreness of the Skin, but only a mere Weakness of the Muscles, and Tenderness of the Flesh after this severe Illness.

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ANOTHER Observation, which I took a pretty exact and particular notice of, was; That upon several of the Nails of my Hands there appear'd certain semicircular Fractures at the Roots of them, which by degrees came more and more in Sight, and appear'd at last to be perfect round Holes, one upon each Nail, for four or five of my Fingers; and upon one of them, (where there was not such an Hole,) a fine Orange colour'd Spot appeared, rais'd hollow or emboss'd about the bigness of a very small Pea; which, upon scraping with a Penknife, I found was nothing of a Scab or Pus, but the very Substance of my Nail swell'd and rais'd thus, and ring'd quite thro'. These all continued with me about two Months, till they grew out; for I did not shed any of my Nails: and during that time I shew'd them to Dr. *Johnson*, and others, who own'd they were particular, and such as they had not met with before.

THIS is all that I think fit to mention here of my own Case; and all the Reflections that I shall make upon it is, that so far as one single Example reaches (and it would be difficult enough perhaps to find another, where so complex a Method had been used) it may show, that first a cool Regimen, then Purging, then Vomiting, and afterwards Sweating, all used successively in the beginning, or first State of this Distemper, were not all of them able either to curb, exhaust, or even any ways abate the excessive Malignity of it. What they may do singly shall be farther and more strictly enquired into in this Piece,

BUT I shall first take notice of some Methods used for a more speedy way of curing this Distemper than ordinary.

C A S E II.

THE eldest Daughter of Mrs. *Buck*, (Mother to the present Minister of *Marston* near *York*,) young and

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and beautiful, near the Prime of her Age, happen'd to fall into Symptoms like the Small Pox before their Eruption. Mrs. *Buck* had reason to suspect it would be them, by reason that her Son was then ill of them in the House. She was concerned however for her Daughter, and her Daughter her self much more; who shew'd very violent Fears and Apprehensions of the Distemper when she felt her self ill, and begged hard of her Mother, that, if she could possibly, she would prevent it. She seeing this Dread upon her Daughter, and fearing the ill Consequences of it, resolved to try the Hazard of preventing this Distemper, rather than the Danger her Daughter must apparently undergo by it.

SHE sends immediatly therefore for a Chyrurgeon, and orders him to bleed her Daughter very largely, which was done; and the Pains and other Disorders in a great Measure vanish'd. It was repeated again, as soon as as she could bear it; and so (I think) a third time, as much as ever she was able to bear; and by this Method alone she was deliver'd from it.

Now tho' this Case before us may be look'd upon by some as a Distemper fram'd in the Fancy only, and so no Remedy needful, but one that should work strongly upon that: and I may be told, that if not a Drop of Blood had been drawn, this Disease would have gone off, especially if the Patient could but have been perswaded that an effectual Remedy had been us'd: Yet I shall the rather take these both for a real Distemper and a real Cure, by considering how many very successful Experiments have been made by this Method, upon another malignant Distemper (*a*), I mean the Plague,

(*a*) Vid. *Syd.* Page 68.

which

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which is hinder'd in the beginning from breaking out into a Sore, and cured speedily without more to do by Blood-letting, largely, and in good time administred for this end.

I shall endeavour to explain this Operation or Effect to my Readers, borrowing only a Similitude from *Sydenham*, which he has often us'd, *viz.* of comparing the Malignity of Epidemical Distempers to the Nature of Fire, which catching hold of any combustible or inflamable Matter, presently turns it into the same Nature with its self: and so the Conflagration is propagated the more, the more and greater Quantities of such Matter it meets with in its Progress. Thus the Plague and other Malignants rather increase and grow the hotter, the greater Numbers they meet with to spend their Rage and Fury upon.

THERE are other Similitudes this Author gives us (a) of these two things besides, by their Effects, which I shall pass over here, and only consider some of the various ways, by which a common and material Fire may be extinguish'd, and apply them to our Purpose, by way of illustrating this, and some other Matters of Fact, which occur daily in Physick.

'TIS known that there are several ways of extinguishing common Fire or Flame. The most noted I think are these: The first is by something that is of a specifick Quality, contrary in its Nature to that of Fire: as Water, which immediately extinguishes most kinds of Fire. And could we meet with such a real Specifick, or true Alexipharmick, in Physick, either for this, or any other Epidemical Distemper, 'twould doubtless be very highly

(a) Vide *Syd.* pag. 63. lin. 12.

valuable: but this is one of those things that, as our celebrated *Sydenham* tells us (a), 'seems to lie hid still in Nature's Bosom, nor to be taken thence but only by a Mechanick Reason.

A second way is by Compression, confining or smothering it; which presently puts out any common Fire or Flame. But whether such a thing be really practicable in the Case or Distemper now before us, is something doubtful; and I shall not now enter into the Dispute of it.

A third way is, by taking away a considerable part of the inflamable or inflamed Matter; or else dividing it into several small Portions, and setting them at such a distance, that the Particles of Fire in every one of them may be out of the reach of the Sphere of Activity of the other; by which means being deprived in a great measure of that Action, Power, or Force, which by our most excellent Mathematicians (b) is called Action and Reaction, it necessarily decays, fades and dies away; as every ordinary Person may and does easily observe.

Now to apply this last to our present purpose, and suppose, with *Sydenham*, a Fire or Flame, either of the Plague, Small Pox, or other epidemical Distemper, to have caught hold of the Blood, and beginning to act after its own Nature, viz. to increase continually, and to assimilate the whole Mass, giving it the same Qualities with its self, but upon being early perceiv'd by its Effect, immediately this Remedy is us'd, of subducting a great part both of the Flame and Fuel of it, by large Blood-letting, as I have mention'd: The remaining

(a) Page 64. at the bottom.

(b) Vid. *Harris's Lexicon*, 1st and 2d Vol. under the Word *Heat*.

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part of the malignant and fiery Particles mix'd with that Mass of Blood still within the Body, must abate of its Force and Power of acting or enkindling, for these two Reasons.

FIRST, Because that in a smaller Mass of Matter, the Heat cannot be so great, nor of near so long continuance, as in a greater; which may be experimentally, if not mathematically proved.

SECONDLY, It must be diminish'd; because there will not be the same Density of that Blood which remains, and which was necessary perhaps for the continuance or propagation of that Heat or Fire as is afore suppos'd.

THOSE who do not readily apprehend this, must consider that the Blood is of a very elastick Quality, so as immediately to extend or rarifie when the usual Pressure that was upon it is any ways diminished or taken off. Now upon taking away any Quantity of Blood from the Body, there is greater room left for the rest to possess in the Veins, and which is immediately occupied by it, and there must of consequence be greater Spaces or Intervals between all or many of its parts, as in rarified Bodies appears. Now if these Spaces are so great that the small Particles of this Contagion or Fire are remov'd out of the Sphere of Activity, (which how great or how small it is, cannot be exactly determin'd, but probably admits of Variations, according to the Nature of the Malignity, the peculiar Quality of several Persons Blood, whereby they are more susceptible of it than others, and the time that it has had to fix or enkindle it self thoroughly in it) I say, if by this means the contagious Particles are separated and removed to such a convenient distance, that they cannot actuate, cherish, or enforce one the other, their Power must necessarily fade and

and die away; as in this Instance I have given, and in that more pregnant one of *Sydenham's* refer'd to before. And this from mechanical Reasoning, as well as Experience, seems the necessary Consequence of such a Method, viz. of Blood-letting in epidemical or contagious Distempers, if administer'd in due time, and in such a quantity, as is necessary for the undertaking this so speedy way of cure; which if it chance to hit (tho' there is a very great hazard of it in the Small Pox) is yet attended with this ill Consequence, that it destroys the Constitution, by an excessive Evacuation or Exhaustion of the Blood and Spirits: The Person upon whom this Tryal was some Years ago made, having never enjoyed that settled Health and strength of Constitution which she naturally had before.

And indeed this Method seems full of hazard, and liable to Disappointments every way. First, from the particular Nature of this Distemper, the Fire of it being of a more (a) gross and unctuous Quality (as *Sydenham* seems to express it) than that of the Plague; and therefore is more adhesive and renacious to its Subject: nor will very easily part (by this way of separating or dividing its force) from it. Besides, it is very difficult, either to lay hold of the proper time, which, according to *Sydenham's*, and all good Reasoning, ought to be very early: or to take away such a Quantity as is needful in these Cases (b). And in failure of either of these Particulars, the Disappointment will be very great, and even the reverse of what I have before related often happens; as will appear both from the same way of reasoning, and from too frequent Expe-

(a) P. 106. *Species Inflammationis pinguioris ac magis crassae*, in the Original.

(b) Vid. *Syd.* p. 72.

rience in the Case. For, supposing (the same Rules of Mechanism consider'd) but only a small quantity of Blood to be taken away, the remaining Mass cannot be much lessened in its bulk; nor consequently in the quantity, intenseness or duration of its Heat, upon the first account.

But upon the second, it will be very often really increas'd. For upon that small room that is made in the blood Vessels, and the little rarefaction that succeeds in this fluid of the Blood thereupon, these fiery Particles cannot recede far enough to be out of the reach of each others Sphere of Activity.

And yet having gained so much room as to act with the greater Freedom and Force upon one another, the Heat is immediately and very sensibly increas'd, after the same manner as we observe in a common Fire; while the Materials of it lie closely and compactly together, the heat of it is confin'd, and oftentimes not so perceptible: but being rais'd or stirr'd up, it exerts its Fury or Force the more violently, for being a little enlarg'd in its room or dimensions. Whereas, if the Parts of it be farther extended and separated from one another, it naturally deadens and goes out, as in the former Case has been explained. And this sort of Mechanism will serve to explain several Phenomena in Phylsick, particularly one extraordinary Case of a Fever mention'd in Sydenham (*a*), which may be liken'd to an Experiment of Water, being a little warmed, and then the Pressure of the outward incumbent Air taken off, which increases its Heat and Motion very sensibly. Also the Reason will appear why very frequently (*b*) Bleeding in the beginning of

(*a*) Page 436. See the Word Heat in *Harri's Lexicon* Vol. 2.
(*b*) Vid. *Syd.* p. 89.

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this Distemper of the Small Pox, instead of suppressing them, hastens their too early Eruption with greater Violence and Injury to the Patient, than otherwise they could be attended with in their natural and ordinary Course. I say, this often happens, but not always. For the Blood of Persons being of a very different consistence and texture, the Rarifications of them will be as variable and uncertain: some Persons being generally cool'd by it, and others always heated. And I could give an Instance of one, who upon several trials in Pleurisies, &c. has been always thrown into a violent Fever by it. This Person's Temperature seem'd pretty apparently inclinable to the Aduſt and Cholerick: and Mr. Boyle has shew'd, that Bile or Choler has the same tendency to Rarification, as the Blood has; but that 'tis hindred something by its tenacity, thickness or glutinosity; which may be the Reason, why not only it retains its Heat longer, as all the thicker Fluids do; but why it is reduplicated or increas'd by the forementioned means.

THERE is one thing wants to be explain'd; and that is, why repeated Bleeding is often requisite, even when the Pain and Disorder is actually eas'd, and the Distemper seems to be destroy'd by the first Evacuation thus made. For according to this Hypothesis, the power or force of this Fire or Heat in the Blood being once diminished, it must still lessen, as in the Instance I have given of a material or common Fire. The Similitude I have given will hold in most Cases, I am perswaded; but there is this difference, The parts of a material Fire, being once divided and placed at a due distance from one another, cannot remove or approach nearer than they were placed at first; but the Particles of the Blood may, and do approach nearer to one another by de-

grees after such a Separation. First, because the Vessels, *viz.* the Veins and Arteries that it is contain'd in, have an elastick Quality in their Fibres, as all the membranous Parts of the Body have; and some of them almost in an inconceivable large degree. So that to whatever Dimensions they have been extended, yet, upon an Evacuation of what held them to that magnitude, they will in a short time subside; and there shall seem almost as strict an Embrace of this smaller quantity of Matter contain'd in such a Vessel, as there was before of a larger one. Supposing still this Membrane to be supply'd with a constant Moisture, and not to have lost its Tone and Strength, and likewise to have time for such a Subsidence or Contraction of its self. All which Requisites are here naturally and actually allow'd, and are enough to solve this Difficulty.

But there is another thing may help to do it too; and that is, that these Veins are very easily replenish'd again by the Reception of fresh Food, or Chyle ready prepared in the Stomach and Bowels, which is sometimes very hastily drawn in (a) after an Evacuation to fill up this Vacuity. So that the whole Mass is rendred of near as dense (tho' not of the same) Substance as it was before, and therefore requires to be rarified again by the same means: Which are the Reasons why repeated Phlebotomy, or Blood-letting, is often necessary where the first has not been very large, and perfectly sufficient; as in these Cases we meet with in *Sydenham* and others.

I shall pursue this Matter no farther here, having no design to write a Treatise upon the Subject of Bleeding, but only to demonstrate in a way somewhat mechanical, that, tho' we could be assur'd that this Distemper in the beginning [or first Attack of

(a) See *Sanctorius de Medicina Statica*, Sect. 1. Aph. 49.

it] would yield to Blood-letting, as well as the Plague doth, (of which we are pretty certain from our excellent *Sydenham* to the contrary,) yet 'tis nevertheless a dangerous Method (all Circumstances of it consider'd.) And whoever hopes, from the observation of any such Case as I have before mention'd, that Bleeding in any quantity or degree must proportionably diminish the Malignity of this, or any other Distemper, in the same quantity or degree, will find himself mistaken in his Account: both Reason and Experience exclaiming against him. For, tho' Blood-letting in a very large quantity quite extinguishes and destroys the very Essence of the Plague; yet 'tis highly dangerous if admitted in but a small quantity, as our Author (a) has shew'd, and given us his Reasons for it: Namely, ' that the Administration of Affairs is by this means taken out of Nature's Hand, and yet in the mean while another Method is not substituted that is strong enough to evacuate the morbid Matter, &c. Which Reason will hold most strongly in the Case: we being obliged to follow Nature more absolutely in this Distemper than in the Plague, as our Author has sufficiently shew'd (b).

I should now give some Account of that other Method treated of by *Sydenham*, for the immediate Cure of the Plague and other epidemical Distempers, viz. by Cordials; and which has been too often used for extracting or forcing out the Malignity of this of the Small Pox: but how absurdly, and with what ill success, has been pretty largely shewn by our Author. So that I need add but little to

(a) Vid. *Syd.* pag. 67.

(b) Other more common Arguments about Blood-letting the Reader may have recourse to by the *Index* or Table of this Book, towards the end of it.

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those Cautions he has given. However, I shall set down one Passage of his at large, which perhaps has been too much neglected or overlook'd, it being inserted neither in his Treatise of the Plague nor Small Pox, which are the chief of epidemical Distempers; and so may very easily be pass'd over by only an occasional Reader of him, (as a great many to whom I address this Piece must of necessity be.) It is, I think, more full and declarative of his own Sentiments and Opinion about the Subject of Malignity only, than any other to be met with in his Works (a).

But before I make an end of this Discourse concerning epidemical Diseases, I must answer one Objection, which I foresee will be urged against some of it, viz. That it does not sufficiently provide against that Malignity, which is in most of those Diseases. I neither can, nor will endeavour to vilifie the Opinion receiv'd of learned Men of all Ages concerning Malignity, for it manifestly appears in most epidemical Diseases. I only desire to propose what I think concerning the Nature of it, that my Practice may not seem disagreeable to Reason; for I, according to the learned Scaliger, will be governed by Reason. *Non mihi sed ratione; aut que ratio esse videtur. Milito; securus quid meridianum hic tenet, aut hic.* Therefore I think all that Malignity which is in Epidemics (whatever the specifick Nature of it be) consists and ends in very hot and spiritous Particles, which are more or less contrary to the Humours contained in the human Bodies; because only such Particles can so soon alter the Humours, as we see they are in malignant Diseases. I think also that these hot and spiritous Particles endeavour chiefly

(a) Page 178.

to assimilate; because, according to the Law of Nature, every active Principle is busied in creating its like, and in turning and accommodating whatever is contrary to its own Genius. So Fire generates Fire: and one infected with a malignant Disease infects another by an Emission of Spirits, which presently assimilate the Humours to be infected to themselves, and pervert them to their own Nature. These things being premis'd, it follows, that nothing is better than to eject the Particles by Sweat: for by this means the Disease may seem to be presently rooted out. But this Experience contradicts, and teaches, that it cannot be done in every sort of Malignity. For tho' in the Plague, the pestilential Particles, both because they are subtle, and also because they reside chiefly in the spiritous part of the Blood, may be dissipated and ejected by an uninterrupted Sweat; yet in other Feavers, where the assimilating Particles are not so subtle, and are incorporated with grosser Humours, the malignant *Minera* cannot only not be carried off by Sweat, but is very often increased by those sudorifick Medicines whereby it is sollicitated: for the more these hot and spiritous Particles are moved by the use of hot Things, the more the assimilating Faculty which they have is increased; and the more those Humours are heated whereon they act, the more freely are they assimilated, and yield to the Impressions of them. Whereas, on the contrary, Reason seems to dictate, that those Medicines which are of a contrary Nature, do not only suppress the Violence of the hot and acrid Particles, but also condense and strengthen the Humours, so as that they may sustain the Force of the morbidick Spirits, or conquer them. And Experience (my Mistress) vouches, that the

the purple Spots of Feavers, and the black Puffles of the Small Pox, more readily increase when the Patient is heated, and that they according to the degree of the moderate Regimen, which is very agreeable to them, are wont to decrease and be less'n'd.

Now if any one should ask me how it comes to pass, that seeing Malignity consists of hot and spiritous Particles, there should be very often such small signs of a Feaver, even in Diseases that are highly malignant. I answer, first, it plainly appears in the chief and most notable Instance of Malignity, the Plague, that the morbidick Particles are so very subtle and fine, especially when it begins, that, like the Air, it passes the Blood, and kills the Spirits before it can raise an Ebullition; and so the Sick dies without a Feaver.

But in the lesser degree of Malignity, which is found in other Epidemics, the febrile Symptoms are so small, sometimes, by reason of a Confusion rais'd in the Blood and Humours by the inimical Particles contain'd in their Bosom, whereby Nature being as it were oppress'd, is not able to produce those regular Symptoms which are suitable to the Disease, but almost all the Phenomena are irregular, by reason the Oeconomy is quite subverted; in which Case the Feaver is often depress'd; which if it could proceed according to its own Genius, should be very high. And sometimes also fewer signs of the Feaver shew themselves than the Genius of the Disease requires, by reason of the Translation of the malignant *Materia* upon the *Genus Nervosum*, or upon other Parts of the Body, or upon the Humours, without the Territories of the Blood, whilst the matter occasioning the Disease should be yet turgent.

BUT however it be, I cannot so much as guess what other method of Cure is to be appointed for any Malignity besides that which is proper to the Epidemick to which it belongs. So that whether the Epidemick be of the Number of those that require, first, Concoction of the febrile Matter, and presently after the Ejection of it rightly disposed by Sweat, or of those that endeavour to go off by some Eruption; or also of those that require the help of Art to make a Way for them. I say, in all these kinds the Malignity (the Companion of the Disease) will stand and fall with it, keeping pace with it, and going off when it goes; and consequently whatsoever Evacuation agrees with the Fever, the same agrees with the Malignity, tho' the Evacuations are contrary to one another: therefore Sweat, which follows Concoction as its Effect, will cure that Malignity which accompanies Autumnal Agues, and also the continual Fever, which is of the same Nature; also the seasonable ripening of the small Abscesses carries off the Malignity in the Small Pox; and so of the rest. In all which, the peculiar sort of Malignity is best conquer'd by these ways and means, whereby those peculiar Diseases to which it belongs are easiest cured, whether by this method or any other. This Reason dictates, and is every where confirm'd by Experience.

HERE our Author, after he had exploded the vain Pretences made by ignorant Practitioners in Physick, of I know not what Malignity in almost every common Distemper, when any Patient has happen'd to miscarry under their Hands, tho' 'twas never so apparently by their own Fault or Mismanagement, of which he has given us only a small hint about a Page and half before, but has in other Places been

more severe upon them, as particularly in p. 26. he here confirms the Opinion of all good Physicians concerning the Reality of a Malignity in some certain Distempers, and explains his own Notions of it in as clear and proper Terms as he could devise or frame for that Purpose. He goes on, and tells us the reason, why all malignant Distempers must not be manag'd by the same method, *viz.* because, that by Experience (and that very large, as his undoubted-ly was) he had found that Nature her self would not bear the same methods in one as in another; and he particularly specifies in the Small-Pox, the Malignity of which cannot be expell'd out of the Blood after that speedy and forcible manner as it may and ought to be in the Plague, (the Reason of which I have partly given you from him already,) but as he tells us it is best and safest carried off by the lessurely and seasonable ripening of the small Abscesses or Pustules; &c. This he has shew'd us by many useful Examples and Cases in his own Practice, and some fatal ones of others in the contrary method: Nevertheless, why we are oblig'd to this tedious method, and may not hasten Nature in her Operation without the utmost hazard of Injury to her, remains to be more fully explain'd for the Satisfaction of such who cannot acquiesce in the Opinion or Practice of this great Person, tho' never so well approv'd too by others Experience, without something of a Demonstration likewise for it. I shall give what Satisfaction I am able to them in this Particular, and then proceed to other Matters of Fact which may probably discover to us more of the Nature of this Disease, than we have been hitherto let into. I must once more borrow our Author's Similitude for explaining the Matter of Malignity, and suppose, That as there are Fires of dif-

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ferent Qualities, so there are different Malignities, and some much more strong, quick, and irresistible than others; as the Plague, which is compar'd by our Author to Lightning (a), that kills sometimes before it is discover'd, and very often pierces thro' and dissolves the most solid Substances, leaving the more lax, weak, and porous untouch'd or undestroy'd at the same time, and even in the same place.

WHEREAS, all weaker and less subtle Fires are observ'd to have a quite contrary Effect. I shall leave this unexamined into, or unexplained, (tho' perhaps it might be to our Purpose,) and consider only this one general Property of Fire, viz. that all of it seems to require a proper *Pabulum* or Food to nourish or maintain it; otherwise it will either be hindered in its Effect, or else consume, waste and die: and so also malignant Distempers are of the same Nature as has been before suggested. But we have this farther to consider, that tho' all things will yield to the power and force of Fire, yet, some things are much easier consum'd and subdu'd by it than others. As for Example; Suppose an heap of different sorts of Matter, as Straw, Wood, Rosin, Tallow, Coal, &c. which are inflamable Bodies, was mix'd up with other parts or pieces of Stone, Earth or Clay, Plaister, Brick, Iron, Copper, and other Mettals which are not inflamable Bodies, and a common and not over violent Fire was put to and maintain'd among these for a time; the Effect would be this: That the former of these Materials, tho' blended and confus'd with the others, would be all consum'd and destroy'd, and then the Fire would naturally go out of it self, and leave the last

(a) Syd. p. 63, 106.

mention'd Substances in a manner untouch'd or unalter'd. Now suppose the Blood to consist of as many different (a) Substances as I have mention'd, (which is no unreasonable Supposal, but rather Matter of Fact, as has been experimentally shewn,) we must believe that some of these are much more inflamable than others; and therefore, that the more solid, fix'd and less inflamable parts [or Particles] might remain untouch'd or undestroy'd, if such an epidemical or malignant Fire were actually kindled and maintained in the Blood for a time, as is by our learned and ingenious Author suppos'd. And this might happen too without any great Damage, nay, perhaps with a real Advantage, if this Fire were so regulated, and kept in such Bounds, as to prey chiefly upon what was the proper *Pabulum* of the Distemper, and neither too much to alter nor to diminish the rest of the good and laudable Juices which both may be, and are often rendred more pure after such a moderate refining.

THE Reader may wonder perhaps what I mean by a proper *Pabulum* or Food for a Distemper: I shall endeavour therefore to explain my self so far as it relates to epidemical Diseases; which is the Subject I am now upon.

I suppose then that there are in the Blood of all human Bodies certain Qualities or Properties, depending upon the peculiar Matter, Form, or Composition of its Parts, whereby we become liable to several Diseases and Distempers which other Persons or Creatures are not subject to, as particularly this of the Small Pox, which none but human Creatures are subject to. And 'tis further observable, by common Experience, that those of Us, which

(a) See *Boyl's History of Human Blood.*

have it to any considerable Degree, scarcely can be liable to it again ; which has also been observed of the Plague and some other Distempers, and can, hardly, I think, be otherwise accounted for than by supposing the Blood to contain only a Portion of such Matter as is proper for the Nutriment of such an epidemical Distemper ; and when that is spent, the Blood of such Person is no more a fit Soil for this Fruit (as *Sydenham* terms it) to grow in. After the same manner as we see in Earths, which are soon exhausted of their Matter fit for one sort of Grain, and yet are capable of bearing plentifully another immediately after : So when the Blood has been exhausted of that Matter, which was fit for the propagation or increase of one sort of epidemical Distemper, another may, and does very often succeed it ; as the Measles shall often succeed or go before the Small Pox, and the Plague may happen before or after either of them in a short Space of Time ; and yet the first that happens of them, perhaps, shall be pretty severe to a Person, but they rarely happen twice to him ; or if they do 'tis generally observ'd, that they have been at first favourable, and likewise that there has been a considerable Interval of some Years distance between the first and second, or third time of having them. And after all, such a Person commonly receives less Damage by a second, or even a third time undergoing any one of these, than another that has had them but once in a more violent Degree. The Reason of which vulgar Observation will appear from what I have already related, and what I shall hereafter : but these things being at present premis'd, I shall now renew my Argument which was left obscure and unfinish'd to my Reader.

CASE III.

WE will now suppose such a Case as is mentioned by *Sydenham* (a), of a Youth that had been ill four Days of this Distemper, and treated a great part of the time in a very hot Regimen, in order to expell the Malignity of it. The Small Pox were indeed not yet broke out; but this cannot be imputed to the Malignity having not spread it self, or not having assimilated enough of the Blood for that purpose; but on the contrary, from its having assimilated too much of it, as our Author has well explained, (b) and is very plain, from the Symptoms running so violently high too as he has mentioned in the Case; for had the Malignity been expell'd, tho' even but in part, the Symptoms would rather have abated than increas'd, as we may very rationally suppose. And this both Experience testifies, and the strictest Reason will prove to be true: That the Assimilation or spreading of the Malignity must be greater, for the Blood having receiv'd such a violent Heat, both by the Distemper and the Cordials, must have its Texture quite shatter'd and broken to pieces by them, and upon such a division of its Parts, all those Particles which (as I have said) were the proper *Pabulum* [or Food] of it will be certainly assimilated or drawn into its Nourishment, which will cause a plentiful increase of this evil Fruit, after the manner as a piece of Land or Mould that is thoroughly broken, and made fine, and likewise forc'd as much as may be, will yield a much larger Crop for it that Year, tho' it be the more jejune, barren, or unfruitful, especially of the same Grain, afterward. Now tho' this may be an useful piece of work to the too avaricious Husbandman for the present: Yet to

(a) Page 287.

(b) Page 277.

what true purpose or real advantage it can be in the Case now before us, to break, refine and exalt the Blood to that degree, except to secure the Patient that he shall never have this Distemper again; and it is a thousand Pounds to fifty it effects this, but in a fatal manner, I cannot otherwise see. But to leave this faulty and deplorable Case as it is related in our Author, which required the Skill and Authority too of a Sydenham to retrieve: We shall descend to another something different as he has stated it, where the difficult Point (as is vulgarly imagined) seems to be gain'd, and yet the issue of it is nothing better, but rather worse, being more fatal and irretrievable than the former. p. 84.

CASE IV. Here the Small Pox are already broke out, and the remaining Malignity, by the means of Cordials, expell'd or expelling out of the Blood, to the seeming Relief of the Patient: yet towards the latter end, when his Friends expected no Mischief, the Malignity, which one would have imagined should have been quite exhausted or drawn off, appears still remaining, and greater and more violent than ever; which produces those dreadful Symptoms, and at last death it self, as is related towards the bottom of the Page. I shall give an account of this in the same mechanical way as before; and suppose a Fire to be kindled in the Blood, which consisting of many different Substances, is some part of it more inflamable than others. Now if this Fire was raised or maintained, only at a moderate degree, the sulphurous parts of the Blood, or else such as are a proper *Pabulum* for the Distemper (and those not all of them) would be a Prey to it: for the Globules of the Blood being not too minutely broken, many of the more inflamable Particles being

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surrounded by those which were less inflammable, would be maintained and preserved from ruin and destruction by them. But, as this Case was, the Fire of the Distemper being raised and maintained at too great an height, every thing must in time undergo a sort of Separation by it: And first the soft and more Oily parts of the Blood being enkindled, while these lasted yet unconsumed, the Flame was perhaps lambent and easy, and having a free Vent, was much less sensibly felt, than in the former Case, where it seem'd to be reverberated (to speak with the Chymists) upon the Blood for want of such a Vent [or Ventilation]. Nevertheless, the long continuance of it was of as ill consequence or worse: for after these more benign Particles that fed the Flame were spent, the rest being now shatter'd and broken by the too violent Heat, must also yield to the Destruction, after the same manner as we find. The most hard Bodies, and such as will yield least to the Impression of Fire, if they are reduced into small Particles, will presently be consumed and destroyed by it. For Example, Thus a piece of Steel, if it be wrought into very small Wire, and then exposed but to the gentle and weak Flame of a Candle, will not only melt immediately, but be in a manner consumed by it; tho' it requires a much stronger and more intense Heat, to act upon it after such a manner when it is in a greater bulk or piece. And we may easily conceive by this division of the Particles suppos'd, and by the too long Duration of the Heat, why the more gross and terrestrious Particles, as the fix'd Salts of the Bile, and even the *Terra dammata*, or *Caput mortuum* of the Blood, should at last be accended or inflamed, which being not transpirable by reason of their grossness and unsuitness to enter the Pores of the

Skin,

Skin, and yet capable of a more intense Heat, as all the more fix'd, solid, and heavy Principles [or Substances] are, must needs display those *Phænomena* our Author mentions; as first, an Incapacity for Sweating or Transpiring any more. 2dly, A Paucity, and at the same time a violent and intollerable heat of the Urine, from the Contents of it, having acquir'd a costick Quality. 3dly, A Frenzy in the Brain, from the bilious Particles being translated thither, endu'd with the same Properties. 4thly, A violent Uneasiness throughout the whole Body, and presently after Death it self, as our Author has observ'd necessarily ensues.

THUS I have, by enlarging a little upon some of *Sydenham's* proper Illustrations, and adding only a few common and well known Observations to them, explain'd those Matters to the Satisfaction, I hope, of my attentive and unprejudic'd Readers at least.

THERE is only one thing more that I shall add in this place as a thing worth the Consideration; and that is, concerning the different Periods of Time this and other epidemical Distempers take in their natural Course; a thing which both our Author and *Hippocrates* have been very observant upon in many Diseases. Now we find (by *Sydenham* and others) that the Plague often finishes its Course in an Hour or less time, when the Patient is either dead, or out of danger of it: but, that it never exceeds twelve, sixteen, or twenty four Hours at most, we may be assured. But the Distemper we are now treating upon requires sometimes almost as many Days, as the last number of Hours we have mention'd, before we can say the Patient is in Safety. The Nature of these two therefore being so very different in this as well as many other Particulars,

it seems the highest Absurdity to attempt the Cure of them by the same method of using Cordials to expel the Malignity, since in the former only, we can hold out to the full Period of the Distemper, but in this latter, we must of necessity relax, slacken, or intermit them for some spaces of Time at the least. And of how great Danger that is, even in the Plague which will yield to them, has been shew'd by our (a) Author. This Use therefore of Cordials can never be made by any Person of Experience and Consideration in the Disease we are treating of, where Nature will neither be hastened, nor put by in the Work she undertakes by these or perhaps any other Medicines. Our Duty therefore is, to aid, support and assist her, or to suppress (not exhaust) the Violence of the Malignity in some measure: for which End Cordials are highly useful, tho' it may seem a Contradiction after what I have been relating. Yet, I shall explain both the possibility and probability of it in the subsequent Pages of this Piece: but must at present crave the Patience of my Reader while I relate some accidental Cases or Matters of Fact, which, tho' they can hardly be drawn into a President fit for our Imitation or Practice, will certainly afford us Matter of Reflection, and for drawing Consequences, particularly in relation to the proper Use of Cordials, in this Distemper.

C A S E V.

Mr. *John Toller*, a Gentleman of *Lincolns Inn*, for whom I have a great Respect, gave me this short Account of his passing thro' the Distemper of the Small Pox, viz. That being in *London* he was taken by degrees, first with an heaviness in his Head, and

(a) Vid. Pag. 74.

at length with a dimness and half deprivation of his Sight : at the same time he said his Limbs fail'd him, by reason of a Weakness chiefly in his Knees: that consulting with an Apothecary upon these Symptoms (which, with something of a sore Throat, were what he principally complain'd of) he was advis'd to be Blooded, which was done, and that he should not stir abroad for some time. This Gentleman told me that the aforementioned Symptoms all left him upon bleeding, and that he slept perfectly well that Night. In the Morning a Friend and Relation, who liv'd at *Spalding* in *Lincolnshire*, call'd upon him to go with him into the Country, as had been before appointed between them ; and Mr. Toller thinking himself pretty well, prepar'd himself and set forward of his Journey, and with a great deal of Fatigue, especially towards the latter end of the Day (when he could not be persuaded to go forwards without his Friend's using some Force, and whipping his Horse on) reach'd *Stilton* that Night ; he rested well : notwithstanding after this Journey, which was no less than between fifty and threescore Miles, the next Day, being in tollerable order again, he rode to *Stamford*, but was as much fatigu'd as before, yet slept well again after it, and was fresh enough the following Morning to undertake a third Day's Stage of only sixteen Miles, which carried him home to *Billingborough* in *Lincolnshire* ; where finding himself something disorder'd with Breakings out, both upon his Body and his Face, he would needs just then take a Purge ; but it failing to work upon him, and being more out of order the following Night after it, he sent the next Day to an Apothecary to know what he should do further, who was told (at his Entrance of the House) by the Gentleman's Relations of most that had happened

to him, and wishal that they suspected the Small Pox; but he answer'd that it was impossible it should ever be them: So going up Stairs to view the Patient, he in a very short time returned, and told his Friends below, that it was too true, that his Illness was certainly the Small Pox, which were now apparent enough. However, he ordered little or no Physick for him either then or afterwards, and the Distemper soon shewed it self to be favourable, and he has not at present any the least Marks of it remaining.

ANOTHER Instance I shall give of Exercise in the beginning of the Small Pox is as remarkable perhaps as these.

C A S E VI.

Mr. *Back*, the Minister of *Marston* near *York*, told me, That when he was a Lad at School, he happened to fall ill of the Small Pox, and his Mother immediately confined him to his Bed upon their first appearing; but a Thought came into his Head, while she with the rest of the Family were at Dinner, and the Servants too were busie, to make his Escape out of the House: And he had so much Time and Consideration as to put on his Clothes first, and then stole away unobserv'd. When he was got abroad he found some of his Companions playing at Foot-ball; and thinking himself very well (as is frequent soon after the Eruption of this Distemper) he fell in with one Party of them, and play'd a strong and hard-set Game [or Match] through with them; when just at the finishing of it, his Mother's Servant found him in a violent Sweat with his Exercise, and hurrying him home, put him to Bed again a second time; where no ill Symptoms at all appearing, he was managed in a moderate Regimen after, and went thro' the Distemper both with

with ease and safety : and few Persons have had them more favourably, nor any with less Marks of it remaining.

THESE are, I think, both of them extraordinary Cases, and shew what this Distemper will bear, at least in some Persons, at the beginning.

I shall now go upon an Examination of these Accidents, as to what I think might be the proper Effects of them. In the first Case that Proceedure in the beginning, (*viz.*) by Blood-letting, seems to have been rational, there being a fair Indication for the same, not only by that *Capitulum*, fulness, or heaviness of the Head (which was mention'd in the Case) but the dimness and almost deprivation of Sight, which must be caused by one of these two Things, either by the owing out of Water thro' the lacrimal Glands of the Eyes, that might create a seeming Haziness or Mist before them, as in the case of hard Drinkers, when they are too turgid and full of Liquor ; or else this dimness of Sight is caused by an Interception in some measure of the Animal Spirits in the optick Nerves, occasioned by a Compression of them by the Blood Vessels adjoyning to them, being too much extended ; so that either way a Plethora [fulness of the Blood] or swelling of the Humours was discernable, which indicated Bleeding as necessary or useful, and of which those other Symptoms accompanying were likewise additional Tokens, *viz.* the Lameness or Weakness of the Joynts of the Knees, which proceeded from a like Interception of the Spirits into the Nerves, that should serve for their Motion, occasioned by a turgency of the Blood-Vessels adjoyning to them, or else near the Rise and Original of all the Nerves, *viz.* the Membranes or Meninges of the Brain, whence follows an Interception of the Spirits into many

many parts of the Body at once; as not only appears in sanguineous Apoplexies, but in those lesser but more constant and habitual Plethorick Persons, who having been used to Bleeding at certain times of the Year, find themselves afflicted with either a lassitude or weakness of the Joints, an heaviness or fulness of their Heads, or an half deprivation of some one or more of their Senses, if they defer or omit it; but are presently relieved by this their accustomed Evacuation.

Now if we add to these aforementioned Pathognomicks that Symptom of a sore Throat too, in this Gentleman, so early in the Distemper, bleeding seemed highly necessary for all these Causes put together, as not only the speediest, but best Evacuation that could be made, and the Success was answerable, *viz.* a safe Relief at once from all those troublesome Symptoms he was afflicted with together. Nevertheless, what might have been the Event or Issue of this Distemper (tho' as to Appearance it might have been good, had he been managed only by common and regular Methods) we are not so certain, as that it was good in its Event, notwithstanding those seeming very great Irregularities and Hardships: for we find this Gentleman (tho' much fatigued) sleeping sound both after his first and second Day's Journey, which is a sign of the Blood and Spirits being in pretty good Order, though there was a Disease upon him: why he did not continue to do so the third Night, we find an apparent Cause, namely, his taking a Purge before it. To which alone, if any Persons are so far mistaken in this Distemper and the Cure of it, as to attribute any thing of the following good Event or Issue (tho' it never work'd at all, but only disturb'd and disorder'd the aforementioned Gentleman for a time)

time) I must so far declare my self dissenting from them in that Opinion, that I think it owing very much to his Exercise of Riding just before, that it did him so little harm: for if we view *Sydenham* (at pag. 146.) we shall find him prescribing this very Exercise as the best and last Remedy in a natural Purging or Diarrhea. And we may pretty fairly suppose it as good an Antidote against this artificial one of a Purge, if we but allow what is undoubtedly matter of Fact, That the Exercise of Riding not only strengthens the Stomach and Bowels, but so mends the very Crasis of the Blood too, if it be continued long enough, as to put it almost into a perfectly healthful State; so that it cannot easily be dissolved or melted down, either by a Distemper, or the Violence of a common Cathartick or Purge. Another Reason too of its preventing this Effect of a Looseness or Purging almost in any Case, is, by its powerfully exciting the natural Heat of the Body, by which means Transpiration, not only the (a) largest, but most natural Evacuation of all others is promoted; and while this is advanced, the other cannot well subsist or continue, as is both (b) rationally and experimentally known: which two Reasons most apparently show themselves, in that very (c) healthful Persons, whose Blood is of the strongest and best Mixture or Crasis, and who perspire most too, are not easily wrought upon by Purges; but if they are, they prove more injurious to them than to others, though wrought upon in the same degree, by perverting the right Oeconomy of

(a) See *Sanctorius's* Rules of Health.

(b) *Cuius raritas alvi densitas.*

(c) *Qui sana habent corpora, pharmacia purgati cito exsolvantur, ut qui pravo utuntur cibo. Qui bene valent corpore, purgati sunt difficiles.* Hippoc. Sect. 2. Aph. 36, 37.

their Bodies more. For all which Reasons, I look upon it as a singular piece of Fortune to this Gentleman, that he made use of so good a Preventive, as this of Exercise in his Case was.

Tho' it will still appear matter of Wonder to a great many of my Readers, that these Persons should nor either of them receive the least Damage by the forementioned Accidents (as it is plainly matter of Fact they did not) especially, here being seemingly a very great Disorder, and Sweats very copiously and violently forc'd from them; than which nothing appears of more evil Consequence in this Distemper. Nevertheless, I shall offer some Reasons why they both did actually receive no damage, and why they might gain a real Benefit by those Accidents aforementioned.

And first, it ought to be considered (by every Person at least that pretends to any share of Skill in Physick) that there is a wide difference (and it ought even carefully to be observ'd as our Author (a) Sydenham advises us) in that *Phænomenon* or appearance of Sweating, whether it proceeds from Matter first digested or concocted by Nature, and then afterwards expelled by her; or whether she is merely passive, or suffers such a colligation of the Humours by a Disease, or the ill Management of it, as may cause those Sweats to flow. Now in the former of these Cases, these Sweats are and may be term'd critical [or judicial] and of a good Event in many Diseases, but in the latter they are only Symptomatical, and may be reckon'd sometimes a part of the Disease to which they belong; as in Consumptions and other Distempers to which they are frequent, or constant Attendants, and in this

(a) *Syd. pag. 433 lin. 23. &c.*

Distemper we are now upon (*viz.* in the distinct sort of it) these Sweatings are Symptomatical only; and therefore not to be encouraged, as causing no Solution of the Disease. I cannot but agree with *Sydenham* intirely upon this Point, as I have shew'd fully enough. Nevertheless, I shall enter upon an Argument founded upon Experience, and back'd with the Authority of our Author, to prove, that those true critical Sweats produc'd by the Concoction of the Humours, as is aforementioned, by whatever means they can be best obtain'd, are the most real and best Preservatives or Cure of the evil and symptomatical ones; which ought to be avoided or prevented as much as may be conveniently. This will best be understood by those further and clearer Examples that I shall give of it. And first I shall speak of my own Experience in this Matter.

C A S E VII.

ABOUT seven Years since, in the Autumn, I happen'd my self to be seiz'd with a Quotidian Ague at my Brother's House; which after I had had two Fits of, I resolv'd to cure by the Bark: So sending for an Ounce, I took it at six Doses, observing only the usual distance of Time, that I might be sure to prevent the next Fit by taking a sufficient Quantity, during that short Interval which my Distemper allow'd me for it. I was disappointed in my Expectation; for my Stomach and Bowels being over-charged with the Medicine, and not taking any Cordials to assist them, it wrought all off by siege, and left my Distemper still remaining, and the more violent, I believe, by reason that my Strength was something exhausted by this pretty large Evacuation. However, I stopped it as soon as I could conveniently, and renewed the Bark,

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taking such Precautions as were necessary; and in about a Week's time (reckoning from its first Attack) vanquished this Enemy.

BUT it had introduc'd two other evil Companions with it, which I found I could not so easily get rid of; a violent Head-ach, and very diffusive Night-sweats; which would not yield either of them to those few Medicines that I used for the purpose, nor perhaps would they have done to more or greater ones, but in a pretty long Tract of Time, and in a tedious Method of Physick. Nevertheless, I got rid of them both intirely in one Day, by this Accident.

MY Brother designing a Journey to *London* about the beginning of *November*, I desir'd to accompany him part of the first Day's Stage, as believing that a little Exercise abroad would be very serviceable to me. So I rode along with two Gentlemen that went only as far as I did for their Diversion. Our Pace could be but slow, being oblig'd to accompany the Coach for the most part, which my Brother himself rode in. And, I think, it was One of the Clock before we reach'd *Eaton* in *Bedfordshire*, seventeen Miles from my Brother's House, which was designed to be the end of my Stage, and where we all din'd. I eat and drank very well there: being not much fatigued with this very easie Journey, only my Head pained me most part of the way; especially, if I ventured upon a Trot, which I found I could scarce at all endure, tho' my Horse went that Pace very easily for the Rider. Our stay was about two Hours in the Inn, and we spent that Time as freely and pleasantly, as Wine and the Company of Friends together could make us; and tho' I refus'd for my own part any thing that might look like Excess, yet I did not refrain the taking of several Glasses more than I would have ventured upon

upon (a) at that time, I think, on any other Occasion but that of a Journey. We had not above two Hours of Day-light when we set out for Home, taking Leave of my Brother: And it was resolved by my other two Companions who returned with me, not to be left in the dark. So spurring their Horses at first setting out almost to a full Speed, I presently found that mine (which was a fine Galloper, and had run several Matches) was not to be kept behind them. So putting past both, I rid at least a three-quarter Speed for seven or eight Miles, when my Horse (as well as my self) was willing to bear in a little; we being both of us by that time in a pretty handsome Sweat, and mine partly by the pain of my Head (which had not yet left me) was, I think, increased by the Agony, as well as the Motion that I felt in Riding. We had but a short time to breathe in, when one of my two Companions, who was mounted upon a stanch Hunter, came up with me, and was resolv'd to put me upon a second Trial, which Horse had the most Goodness in him as well as Speed; which I was forced again to submit to. My Horse too readily accepting the Challenge, and at the first Motion of my Antagonist's Whip, sprung before him, and I held it by several Lengths quite to the end of the Race, which was our own Home. It was not, I think, much after Sun-set when we alighted there: so that we were little better than an Hour by a fair Computation in riding the whole seventeen Miles. As for the other Gentleman, we saw him no more that Night, but heard that he had got home safe before it was quite dark: and it was not for want of Will, but his Horse's Abilities, that he did not accompa-

(a) See Sydenham's Regimen in this Case, p. 317.

ny us all the way, as he at first setting out most strenuously design'd. This was the smartest and best piece of Exercise that, I think, I ever perform'd for the time; and the Effect of it was as good as I could wish: For tho' I was a little disorder'd that Evening, yet I eat some cold Meat for my Supper, and drank a Draught of small Beer. I went to Bed not much sooner than my usual time; but then fancied my self inclining to a Feaver most part of the Night. Yet I slept part of it; and upon waking found little of that Pain in my Head that us'd to seize me dreadfully at that time. I was free too from my Sweats; and from that very Night felt no more of either of them; and within a Week (I believe) was as healthful and strong, as I have been any time (perhaps) of my Life.

A second Tryal I had of this Method, was after the Small Pox, which brought me to those colligative Sweats again; for after my Flux was stop'd by something of a forcible Method, which yet seem'd necessary in my hazardous Circumstances, and the Pores of my Skin open and free by the shaking off the Scales from my Body, this Evacuation immediately begun, and was very copious and expensive: so that I began to fear the ill Consequences, namely, that a Consumption would follow it. However, I did nothing to stop the same, but as soon as Dr. *Johnson* return'd to me, told him of it, desiring his Advice. He told me he knew nothing that he could say he had found to be a perfect Cure for them; but if I would try a thing that was lately recommended to him by a Gentlewoman, with assurances that it would stop them even in a Consumption, I was welcome to it. I desired to know it promising at the same time to make use of it. He told me it was nothing else but an handful of *Malaga Raisins*

Raisins, cut to pieces and boil'd in a Pint of new Milk, and the Curd being taken off, I was to drink the Possiet-drink ; half of it at going into bed, and the other half after my first Sleep. This I made tryal of the same Evening ; but not with the Success I expected : for my Sweats were pretty near the same as before : The next Night I omitted it, because I had taken a Purge the Morning before, and it had scarce then done working ; upon which account I thought the Tryal would not be fair at least : so I deferr'd it to the next, when finding the effect of it as little as before, I left it off, resolving to wait with Patience, till I could make use of my old Remedy, which I did not question would set me right, if I could but subsist a while upon moderate Cordials and a good Dyet, till it was proper for me to use it. However, I must not omit one thing, which is, that my Apothecary came to me about a Week after, and ask'd me the Success of this last Medicine ; and I telling him as before related, he seem'd to wonder at it ; and said he had made tryal of it but the Day before upon a Lady by *Dr. Johnson's* Order, and it answer'd perfectly well : but there was this Difference I found in our Management ; That my Nurse had not clear'd and fin'd her Liquor well enough ; for the Raisins not being sharp enough of themselves, to raise a Curd of any hardness, I was forc'd to take it all together, almost without any straining ; which made it not so agreeable, nor perhaps so effectual to me. But this Fault was remedied by my Apothecary in the last Case, by adding only the Juice of a *Sevil* Orange to the Raisins, which would sharpen them to what degree was requisite, and render the Medicine both much more pleasant and effectual. However, I made no more Tryals of it ; but getting abroad soon after,

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was cur'd by only one Day's Journey of about Ten Northern Miles, *viz.* to *Marston* and back again, which was fatiguing enough to me after such an Illness as I had suffer'd, and I reap'd the same Benefit by my Labour as before, (*viz.*) Health and a Freedom from this particular Symptom of Sweating, which left me that very Night, and return'd no more after. This is what I thought fit to mention of my own Experience in this Method.

BUT we find both *Sydenham*, *Marton*, and other Authors, very large in their Encomiums; and especially upon the Exercise of Riding, which the former shows us to be more useful than any Medicine, for exciting the true (a) natural Heat, both in the Bowels and in the Blood: and which I do affirm with him is as necessary to be rais'd and maintain'd in this Distemper (if we would have the latter rightly purified) as in any other whatsoever. So that if we consider matters impartially and thoroughly, these Gentlemen used the very best Preparative that could be imagin'd or thought of, either in this or against any other Distemper almost that could befall them: and no wonder that they both went through it with the greatest Ease and Safety, as we have before observed.

I cannot but inlarge upon this Subject, tho' I have no design to introduce a Practice founded upon those Examples, and others that might be given, but only to advance a try'd Method, that may be in some Measure an equivalent or substitute for it, and yet not be liable either to those real Dangers, or the false and vulgar Apprehensions of them, which this (extraordinary Method in this Case) must needs be subject to.

(a) *Syd. Pag.* 146. and 326.

I have shew'd already, That strong Exercise is a good Preventive, or Cure, of those Symptomatical Sweats, which, as *Sydenham* informs us, are a constant Attendant of one sort of the Small Pox. It now remains to shew, That it is as good a Cure, or Preventive of the Flux too, which is the constant Attendant of the other. *Sydenham* has mentioned this Symptom as an Attendant of several Distempers besides the Small Pox; and in one of them has not only told us of its being an attendant sometimes, but has given us, I believe, the true Causes of its Existence, only in a conjectural way (as was his manner frequently to do) in his Treatise of *Hypocondriack and Hysterical Distempers*; where he says^(a),

And perhaps the Spitting, so common to Hysterical Women, proceeds from the Spirits disturbing the Blood, they spit thin for many Weeks, just as if they were salivated by Unction: for during this disturb'd Motion of the Blood, in which it is not able to perform Evacuation according to Nature's Method, the Serum by chance taking this contrary course, is not evacuated by the Reins, according to Nature's Rules, but is put off by the Extremities of the Arteries upon the Glands, and so comes forth by the salivary Passages in the form of Spittle. The same may be said of those violent nocturnal Sweats which afflict Hysterical Women; which proceeds from no other Cause than the ill disposition of the Serum of the Blood, by which it is inclined to be put off upon the habit of the Body, by reason of the Confusion of the Blood, just now mentioned.

HERE our Author asserts the same Cause for both these Indispositions: namely, the violent disorder

(a) *Syd.* Pag. 311.

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of the Blood and Spirits, and the melting down the Serum of it, for want of a due Crasis, and firm Con- texture of its Parts. Now from whatever remote Cause or Disease this may proceed, the Effect we see is still the same; either a Sweating, a Flux, or else an extraordinary Evacuation by Urine: which last indeed is not common in the Small Pox, tho' it had been worth the while in that extraordinary Case *Sydenham* mentions, of a Person who had the confluent sort, and yet did not flux in them, to know whether he had not a larger (a) Evacuation this way, or else by Stool, as Children are observ'd to have: for these things seem to differ only in parti- cular Circumstances; Sweating requiring some- thing of a less degree of Colliquation, and a great- er freedom from Pain or Contraction, which closes the Pores of the Skin and hinders Transpiration: whereas, Fluxing requires almost an universal disso- lution of the Blood, and withal, something of a stoppage of the Pores by Cold, &c. as aforesaid; or their being beset with such Matter, as is not pro- perly transpirable, as the innumerable Pustules of the Small Pox in the confluent kind, where they spread themselves almost all into one and cover the whole Skin, as is visible in a little time to the Ob- server; which two Causes united are the Reason of their fluxing: or lastly, if there should be stronger Contractions than ordinary, and continu'd by Fits only, it might cause that readier Evacuation by U- rine, as in Hysterical Paroxisms, Frights, &c. And here we can neither be at a loss for Causes, nor their Effects; for every one must be sensible of the wonderful disturbance there is, both in the Blood and Spirits of such as are attack'd with this Distem-

(a) See *Morton de variolis*, p. 103. *Profluvium urine salivationis succedaneum.*

per in any violent^(a) degree. How it causes the same Pains, Coldness sometimes as well as Heat, Vomiting, Convulsions, &c. as in the other Case of Hystericks. What better Preservative therefore could we have for the Blood and Spirits, than this which proves such an admirable Fortifier of them both in this latter Distemper, and in almost all Consumptions, as our Author affirms; where all these Symptoms of a Diarrhea or Looseness, Spitting and Sweating alternately infest the Patient, and yet are all vanquish'd by this admirable Prophylaction [or Preserver] (*viz.*) Exercise only?

THUS these two main Symptoms, or constant Attendants of the Small Pox, are best answered by the aforesaid Method, which lessens, moderates, and even totally suppresses the same. An incautious or inadvertent Reader may wonder, why I will make use of this last Term, especially when Sydenham has laid his only Hopes sometimes in maintaining one of these Evacuations, tho' he has condemn'd the promoting of the other. But the reason of this is plain from himself: for when the Pustules are very numerous, and the Disease very high, so that the whole Mass of Blood is as it were poison'd with it; there is (as he tells us) need of such an Evacuation: but our Business here is to hinder both the Disease and the Symptom from growing too high. And every body's Experience must tell them, that those who have this Distemper favourably, neither have this Symptom of a Flux with it, nor have any occasion for it; so that this is at best but a frivolous Objection.

How, and by what mechanical Laws the general Depuration of the Blood, which is another very ma-

(a) See Morton of the colliquative Nature of this Disease, pag. 119. de variculis.

terial thing to be regarded in this Distemper, is advanced by this Method of Exercise, I shall not undertake at present to demonstrate, and shall only give this Illustration of it: That as the principal Fluids of the Globe are preserv'd from Putrefaction and Corruption by Motion chiefly; and as certain Liquors are not only rendred stronger, but more capable of refining themselves after a long Carriage or Motion: So we have the same Reason and Experience too, for the Blood and other Juices of the Body to receive the same Advantage.

It is now time that I give my Reasons, why I am against the Use of this Preparative (which I have spoken so much in the praise of) in the particular Case before us; which are not the same as might be vulgarly apprehended: namely, that by such an unseasonable Motion or Agitation of the Humours, we should be in danger sometimes to confound all Secretion, and that especially if any Cold should strike upon the Patient at such a time of his Exercise, it would not only hinder the regular coming out of the Small Pox, but might prove fatal. I shall answer this only by an Experiment or History.

C A S E VIII.

THE Reverend Mr. Ekins, some Years since, Minister of *Quapod* in *Lincolnshire*, happening to be a broad about eighteen or twenty Miles distance fell ill; but yet resolving to return home. His way led him through *Spalding*; where he call'd upon a worthy and long experienc'd Physician of the Place (with whom I am acquainted) desiring his Advice; telling him that he was very ill, and had got (he thought) some breaking out upon him. The Doctor desir'd him to alight, and to go into his House; where searching and viewing of him strick

ly, he at length pronounc'd his Distemper to be the Small Pox ; which was so disguis'd and misfigur'd by his Riding and the Cold (I suppose) together, that he could find but one single Pustule that had its genuine Shape and Appearance to distinguish it : the rest being all confus'd, and without any proper mark at all. I ask'd the Doctor what became of this his Patient, and he told me that he did very well, and that no manner of harm came to him upon it.

It may be said indeed by some, that all these Persons might by accident have the Small Pox of so very favourable and mild a kind, that they could not easily injure themselves : But this is really not so fair nor so strong an Argument as they who object it would perhaps have us take it to be.

For first, there ought to be some Proofs given, why this Distemper should be naturally mild and kind to all the foremention'd Persons ; and secondly supposing it to be so, by their peculiar Temper or Disposition, yet the Argument would scarce hold, I think, by an Instance that I shall give.

C A S E IX.

THE worthy Physician above-mention'd, who furnish'd me with the last Case, told me, that eighteen or twenty Years since, he was employ'd in a Family at *Pinchbeck* (within two Miles of him) namely, the Minister's, which had got the Small Pox among them ; and being pretty numerous of Children, he had six or seven Patients at once. There was one of them which he peculiarly remark'd had the Small Pox as favourably came out, as any he ever saw : so that he ran about the House at play after it, as if nothing had concern'd him ; and, as the Doctor told me, might still have been suffer'd to have gone about the House without da-

mage, but for the following thing. This Child, being a Boy, was it seems his Mother's Favourite; and she was more solicitous about his particular Health, than of any of the rest that were then ill. And being over-careful would needs give him Sack in pretty good Quantities to drive out the Distemper, which immediately chang'd the Nature of it from the most distinct, to the most confluent sort: and the Doctor told me, that 'twas with very great difficulty that he could save his Life afterwards, which would not have been in the least Danger, but upon the foremention'd account. So that we see the Nature and very Species of this Distemper depends very much upon a Regimen; and had that of Exercise been injurious, being us'd in such an Extremity or Excess, as I might say, in all those Cases before related, it must have shew'd its ill Effects, had those been the genuine Products of it: whereas, on the contrary, we find the consequence of it to be only good in them all.

A second vulgar (a) Objection would be, that we know not the most proper time for using this. But to it I answer, That tho' this has been and is look'd upon by most Physicians as a very improper Method in any acute Distemper, except at the very end of it, and then only as a restorative to invigorate the too much enfeebled and weakned Crasis of the Blood; yet, we see pretty plainly, from those recited Cases, and from the *Rationale* I have already given of them, it may be of use at least as a Preparative in the beginning, and that too in something different Seasons: there being several Days difference in the time of one Person's using it and of another, as will appear by perusing of all those

(a) Note, Some of the Ancients, *Herodicus* particularly, us'd Exercise in all Distempers, tho' erroneously very often.

Cases over again which I have mention'd, and yet every one of these were very fortunate and good in their Event, as we have seen. • But again it may be objected, that *Morton* has given us some Cases where this Distemper has prov'd fatal or dangerous after Exercise. To this I answer, that there are or have been likewise many Cases of Consumptions, Dysenteries, Hystericks, &c. wherein Persons have found as much and as frequent damage by Exercise: Nay, People that are perfectly well not uncommonly get Illnesses, and sometimes their Deaths, by an improper Management of it. And yet, this should not discourage others from making an advantage and use of it in any Symptoms or Cases that require it, whether as a Prevention or Cure. And if both Experience and strict Reason shew, that the evil Symptoms of this Disease, or those which are its most constant Attendants, are best regulated or quell'd by such a Preventive, it might yet seem advisable to use the same: which, notwithstanding, I shall not urge, or persuade any one in the least manner to do, but rather give him a Caution against it upon these Accounts that follow: the greatest difficulty in which, is, the dosing of this Recipe or Advice; which is so very great an one, as to quite discourage many who have taken to this Method in less dubious and hazardous Cases than this appears to be. For there are not only many Persons that cannot bear a great deal of Exercise, and yet are benefited by a moderate use of it; but others that cannot bear a little, and yet would be very much advantaged by a great deal.

THIS, however contradictory it may seem, is yet Matter of Fact; and I my self am very well acquainted with a Person, who being well advis'd by several Physicians, to use Exercise for his Health, has

has follow'd their Prescription, and us'd it moderately on Horseback, to three, four, six, and sometimes to ten Miles a Day, yet never could perceive any Benefit by it; but rather that his Spirits were lower and weaker always after it than before: and yet this same Person, whilst he was under the same Indisposition, has twice undergone a violent hard Day's Journey, and when he has expected that he should hardly escape Death, by the Disorder of it, on the contrary has found himself the next Day much stronger and in better Health for it. And I know a very good, as well as prudent and ingenious Lady in the North, who being advis'd to use a little Exercise for her Hysterical Indisposition, chose Dancing with her own Family or Friends; but she has told me, that in the beginning she always finds so great a Difficulty in moving, and such a Disorder and sinking of her Spirits upon it, that she is forc'd to make use of her utmost Resolution to go on with it; but that in time and by her striving to bring her self to as quick a Motion in her Dancing as she can, her Spirits at last revive, and she is able to hold out as long as any of the Company. And whoever sets about this Method too warily, or lazily, or thinks that a turn or two about the Room, in a Field, or Garden, will do the Feat, shall find himself as much mistaken, as a Vintner, or other Merchant of Liquors, who should pretend to improve them by giving them a remove only once or twice a Day in his Cellar; which instead of clearing them, or giving them a better Body, would be the ready way to turn them all to Vinegar in a short time. The Matter being thus, and that the Virtue of this seems to consist more in the Extremity, than in any thing of a Mediocrity, or Mean (as will appear by the Examples before related) it may be
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look'd upon as impracticable or unadvisable for the most part; there being in most People, either a real Inability, or Unwillingness at least, to try this thing as they ought. So that all the Use of it (as I at first mention'd) is to make such Reflections; and to draw such Consequences from it as may be serviceable to us in the Case now before us.

AND first, we ought to consider wherein the chief Virtue of this Method of Exercise consists, which makes it excel all other things that are commonly called Physick, or Medicine, as Sydenham has in several Places assured us. And it will appear, That its chiefest Effects are in being first a real Restorer or Exciter of the true genuine and natural Heat, 2dly, A Preserver of the (a) Blood from all preternatural Fusions, Colliquations, or Dissolutions of its Parts. 3dly, A Maintainer of the Tone and good Constitution of the Spirits, rendring them firm and indissipable; and that it likewise checks the enormous Motions of them, by giving them such a Consistence, Weight and Strength, as makes them not liable to the Impressions of every slight outward Attack of external Causes, nor too much even of the (b) inward ones, of the Soul or Mind: That it fortifies and renders the Blood capable of throwing off all its Impurities, and even of conquering or suppressing almost any kind of Malignity, Venom or Disease; or else hinders it from too much injuring or preying or feeding upon the same, as we have seen by Examples. All which things are of the highest consequence, even in this very Distemper we are now upon; and should put us upon a thorough Search, how these Intentions are an-

(a) See Morton's Opinion concerning the colliquative Nature of this Distemper, p. 119. *De febris inflammatoriis.*

(b) See Morton of Consumptions, p. 16, 17.

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swer'd by the common Methods or Medicines which are used in the beginning of it. And then to regulate them, or to propose such as may be more useful for compassing the forementioned good Designs; But this would be a Task too difficult for me, or any one single Person to enterprize. I shall therefore only take a cursory or general View of some of them; And first of high Cordials in general.

BESIDES the Objections I have made against them from p. 13. to p. 26. These can be no true Restorers or Preservers of the Natural Heat: for they actually lessen and diminish it (as almost all those find who make a constant use of them) nor do they preserve the Strength, Union or Crasis of the Blood and Spirits; especially if they be of any excessive Violence or Heat: So that these are for the most part improper or unqualified Medicines, upon many accounts, too numerous to repeat.

THE second things I shall consider are their contraries; *viz.* cooling and refrigerating Medicines.

THESE *Sydenham* has been very large in the commendation of; and indeed, several Circumstances considered, it was with very good reason that he was so zealous upon this matter. For the use of the fore-mentioned high Cordials and Diaphoreticks, were so very much in vogue before his time, that they must have been the Destruction of many thousands in this Distemper. Which if it be really too hot an one in its own Nature generally (as *Sydenham* seems to hint (a) to us) there should be the less occasion for these. Nevertheless, we find him not only standing up for the maintenance of a natural Heat in it, but of the Fever too; which he

(a) Page 87.

tells us (a) is Nature's Instrument. And as we should not endeavour to wrest it from her by Violence, after the manner he mentions there; so neither should we disable her from using it in her own proper time, and for her own Occasions: as sometimes may be done by too refrigerating Methods or Medicines. And tho' I believe I might in my own particular Case do my self a Service by what I have mentioned, p. 2. of my drinking a large quantity of small Beer, as others have also done with that and other Liquors (my Case seeming then absolutely to require it; by reason of the excessive Heat that was rais'd in me, which would in a manner have burnt up and consum'd my very Vitals in a short time. Yet I can by no means vindicate my own Conduct in the former Days: but think, that instead of promoting the Concoction of the Humours, as I ought to have done) I took an effectual way by Evacuation, and a low Dyet of Whey, to hinder their Digestion, which should be the very first Intention always in this Distemper, to assist Nature in, if she require it (b). And tho' as I have mention'd there, I seem'd to have receiv'd some Benefit or Ease at length by that Method; yet it was not till the third Day, when the Small Pox were actually come out upon me (as has been observ'd, Page 2d.) Neither can we suppose, that this contrary Method from the former, is a true Prophylacticon [or Preserver of the Blood] from those preternatural Colliquations or Fusions of it that I have mentioned. For there is scarce any thing worse for them, or for the (c) Confusion and Ataxia of the Spirits, than too poor a Dyet, Eva-

(a) Page 277, 278.

(b) *Syd.* pag. 87.

(c) *Syd.* pag. 312, 313.

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cuations, or a cool Regimen (*a*) in many Cases. Nor can we prevent the Malignity of a Distemper, or else the Imputation, Similitude or Appearance of it at least, from encreasing upon us by this means, as *Sydenham* himself has shewn us in another Case (*b*). And these things may serve as a Caution to those who follow our Author too implicitly, or rather blindly and erroneously; he being not an Enemy to all Heat and Warmth in this Distemper, or any other; but only to that Excess chiefly of an Artificial one, which is destructive of the Natural; or of that (*c*), which is, and ought to be the genuine Product of the Disease: I mean the primary Fever.

THERE is one thing I think fit to mention, while we are upon the Subject of a cool Regimen; and that is, The particular use of Spirit of Vitriol: which (*d*) *Sydenham* has recommended so much. The Virtues of it indeed are extraordinary, in that particular Case, *viz.* the Black, very hot, putrefying and even mortifying kind of the Small Pox, which it restrain'd and qualified in a wonderful manner.

BUT whoever should make use of the same at random, in every more common kind of Pox (*e*), would find it may be that it too much hindred, instead of promoting the Digestion of Matter [or Pus], by overstraining the Warmth, and Fermentation of the Blood: which is the Reason, perhaps, that the

(*a*) Note, These cooling Methods *Morton's* whole Treatise of the Small Pox is almost entirely against.

(*b*) *Syd.* page 26.

(*c*) See page 277.

(*d*) See *Sydenham*, page 169, &c.

(*e*) See *Morton Historia*, 43.

use of Acids are now almost laid aside, in this and other Distempers, after the general Vogue they have been in since *Sydenham's* time. And we ought at least to see and know both the Kind and Degree of the Distemper, as *Sydenham* did, before we make use of them in the same or a like manner.

ANOTHER Method or Medicine for suppressing or curbing the preternatural Heat, and maintaining the natural, is, Milk, which is made use of by Persons of good Skill and Experience in this Distemper. And this, if we consider only what *Sydenham* has said of it, p. 325. may be reckon'd a kind of true Restorative, not only of the natural Heat, but a Preservative of the Crasis or Strength both of the Blood and animal Spirits: but we ought to be very discerning in the use of it; whether the Person be of a Constitution fit for it, and not rather of a gross, pituitous, or flegmatick one. For if he be of this latter, instead of regulating the Heat and Fermentation, so as to be proper for Nature's Work, we may totally extinguish it, to her very great Hindrance and Damage. For the understanding of which, see *Sydenham* upon Fermentation, p. 44. of his Works.

I have now said enough of these Matters for some Peoples understanding of them at least: and the intelligent Reader will easily perceive, that there is no such thing as an universal Method or Medicine, which may serve as a true Preparative, Preservative, or good Assistant of Nature, that may be proper for use in all particular Cases or Constitutions in the Beginning (which is the most critical time) of this Distemper. And yet 'tis almost necessary that there should be such a thing, for the Reasons I have given in my Preface, because of the ill Judgment of most that have to do

with it at that time, which I cannot pretend wholly to correct by what I have here said, tho' I have us'd some of the best Endeavours I can towards it. What remains is to propose some such Method or Receipt, as may be more generally suited to the Business, than what are commonly made use of for bringing out safely this Distemper: which is so main a Point to be respected, that the good or bad Event of the Disease almost wholly depends upon it. Of all those Receipts which I have perus'd for this purpose (which I confess are not very numerous) none of them seems so well qualified or adapted for this Purpose in general, as one that was recommended to me by his Lordship the present Bishop of *Ely*, a Person of no mean Skill and Experience in Physick, as many Hundreds of his Lordship's Patients can best testify. It is a very plain one; and yet has in it all the Properties that can well be desired in the most compounded or elaborate, and is, I believe much more innocent than most of the celebrated Alexipharmicks, &c. can be: tho' it has its Defects too, as well as others, which I shall shew, and endeavour to supply them.

'Tis a printed Receipt in a Book Entitul'd, *Select Observations on English Bodies*, &c. written in Latin by Mr. *John Hall*, Physician; after English'd by *James Cook*. To which is added Counsels and Advices for several honourable Persons.

PAGE 322. Counf. 93. runs thus.

S M A L L P O X.

' THIS was out of Dr. *Stubb's* Collection; which take as writ by himself, as to the Small Pox.

' S I R *St. John Charnock*, of *Shutford* in *Bedfordshire*, assured me, that his only Son, living at *Cambridge*, visited one that had the Small Pox; being sent home thereupon, he fell very ill at his

' Sto-

* Stomach, Head, Back, as is usual before the Pox.
* The next Day he was well; and also on the
* third. The fourth Day he seem'd mortally ill,
* with Vomiting and a violent Feaver. His Lady
* warm'd him a quarter of a Pint of *Malaga Sack*,
* and put to it a good Spoonful of *Sallet Oil*, and *olive*
* gave it him, holding an Orange to his Nose, that
* he vomited it not up. The next Day the Pox
* came out kindly, and he had but very few in his
* Face, Hands, Thighs, nor on his Body: he had
* no ill Symptoms after; but sat in his Bed and
* play'd at Cards till well. His Man catching them,
* and being light-headed, got out in the Snow; he
* was brought in, and had the same Potion; and
* altho' they were struck in, they came forth again
* almost as black as Jet, with no ill Symptoms en-
* suing, but he became immediately well and reco-
* vered. She gave him afterwards sometimes a little
* *Malaga* or *Canary*. This Course he assur'd me he
* had try'd many times in their Country, and al-
* ways with the like Success. Nov. 5. 1671.

THE matters of Fact we see here are very good;
and we may observe likewise, that they had been
frequently repeated or tryed, and always with the
same Success. The Goodness of the Operation
was, That the Small Pox came out kindly and few;
contrary to the absurd Opinion of some Persons
still, who think they can never have enough of
them out. They seem'd to be slow in their Pro-
gression, as appearing not till the next Day after
the Medicine was taken; which Slowness is a ma-
terial Point to be taken care of. For nothing is
more mischievous than too great a Precipitancy
at this Juncture. I shall explain my Notions of
this Matter once more; taking the Hint of my
Similitude or Comparison from *Sydenham*. And
supposing

Supposing a fruit-bearing Tree to be planted in a proper Soil, but by the mistaken Care of the Husbandman or Planter, at a time when it should bear, manur'd with the hottest Compost that can be provided. This would make it shoot out in an incredible Quantity of Flowers and Fruit : but then they can scarce be ripened or brought to Maturity : and as for the Plant or Stock, it will almost infallibly be burnt up and consumed, or else quite exhausted by this Profusion or Exuberancy before-mention'd. Whereas, had it been only supported by a strong and lasting Earth, it might not have suffered this Injury, nor been oppress'd with a too excessive Burthen, which prov'd the Death of it. Now this is exactly the Case or difference between the Use of violent high Cordials, and those that are of a more moderate Heat, but at the same time more natural and lasting ; which are true Supports and Assistants to us, as this particular Medicine will be found to be. And first, this may be reckon'd (*viz.* the *Malaga Wine*) a true Restorative, it having been us'd by *Sydenham* (*a*), particularly for that purpose, to comfort and invigorate the Blood : and being of a thick, glutinous, and even balsamick Quality and Consistence, it can neither be presently dissipated it self, nor cause a dissipation, dissolution, colligation, or confusion either of the Blood or Spirits. And tho' it may cause something of a gentle Diaphoresis or Sweating, yet this is not to be apprehended as ill, if a compleat and perfect Concoction of the Humours has gone before, which this Medicine by its kindly Warmth, and other Qualities must necessarily promote. And if my Reader can rely upon, or credit what I have mention'd

p. 37. (which join'd with what Sydenham has said very much to the same Purpose, p. 163. I hope he may be induc'd to) it ought to be reckon'd rather an Antidote against those symptomatical Sweats (which Sydenham tells us ought not to be encouraged) than either a Promoter or Causer of them. To come now to the other Ingredient, viz. the Salad or sweet-eating Oil (to prevent a vulgar Mistake in some Places, and of having Jack Oil impos'd upon you at a Country Shop, as was once upon me). This seems to have been put into the Receipt, upon the common Notion of Oil's being an Antidote or Preservative against Poison, Putrefaction, or Malignity; and not altogether erroneously: For by its smooth, soft and ramous Parts, it so shackles and obtunds the sharp *Spiculæ* or Points of several Poisons, that it hinders them from piercing or tearing the delicate Fibres, either of the *Viscera* or other Parts, and gives Nature time, by those Efforts that she makes, to expel them. But there is a clearer Demonstration of its being serviceable in this Case, to be given for our Purpose, if we peruse but L'Emery's Chymistry upon the Subject of Quick-lime: the Flame or Fire of which is extinguish'd or suppress'd, instead of being increas'd; by Oil poured upon it. And shall we suppose that too active or fiery Parts or Particles impress'd upon the Blood by accident, either outwardly or inwardly, may not in some measure be suppress'd by the same, especially having experimental Proofs to convince us of it, not only in common Scalds or Burns, but in this very Distemper we are now upon. The Violence and caustick or burning Quality of which, we have good Reason to believe is abated by this means. And the same Author I last quoted, tells us, That common

common Spirit of (a) Wine has the same Effect with the foremention'd; which might be of good Use were it not too active, and that it shock'd and disorder'd the Frame of the Blood and Spirits too much. But being shackled and envelop'd, as in the first of these Subjects or Ingredients, namely, the *Malaga* Wine, it is hindred from doing any Mischief that way, and capable of doing a very great deal of Good by others (as I have shew'd) particularly by its maturating or digestive Quality; which most sweet things are endow'd with above others. But there is one thing I should not omit concerning Oil that is the second Ingredient of this our plain Composition, which is, that tho' it has in it a certain lentor or thickness, in comparison of some other Fluids, yet; that scarce any thing is more searching and penetrant: So that we need not fear but that in time it will make its way through the Passages and Pores of the Body, and with it lead along this Enemy now rendred mild and easie, and give him as fair an Exit as we can wish, if we do not by our own Fears, Impatience, or Mismanagement provoke his Fury and Violence, and give him a needless Occasion to hurt us. And thus I have shew'd, That such a true Cordial Medicine may be found or fram'd, as not only is fit to support Nature, but to suppress her Enemy, and to expel or exterminate him out of her Confines at the same time. And I would have my Reader farther take notice, that this is part of what I propos'd, when I mentioned cursorily the reconciling of those two great Authors, *Sydenham* and *Morton*, in my Preface. The first of which having largely shewn

(a) See *Sydenham's* Notions of Spirit of Wine, p. 199. as to the Use of it in Burns, &c.

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as the Danger of forcing out this Distemper too violently, and the latter us'd as great Endeavours to demonstrate the Danger of still continuing it longer than its proper time within the Body. The Hazards of both sides being very great, and perhaps to a discerning and impartial Reader of those Authors, pretty near equal, are yet both well provided against, as will appear by the Reasons I have given, and by those Examples too mentioned with the Receipt, pag. 53. I come now to Objections. And the first vulgar one that I believe will be made, is, That this Medicine consists of too plain and simple Ingredients, and such as seem proper rather for constant Food almost, than Physick; and therefore cannot have such excellent Effects. But this, I think, is a very unreasonable Objection. For, *First*, This Work or Cure being wholly to be managed by Nature (*a*), and the Physician only an Assistant to her, he ought to apply such things as are a Support and Sustenance; and not such as by their Violence, or contrary Powers, quite unhinge or destroy her. And suppose this thing were neither Food, nor Physick, commonly so call'd, but only a mere Regimen in some particular thing, we should be to blame to refuse it upon that Score; especially if it had been before try'd and prov'd effectual upon others. And had that Learned and Reverend Bishop, whose Case *Sydenham* gives us, p. 326. made this an Objection, That his Physician prescrib'd him no Physick, but rather an Exercise fit only for a Carrier or Post-boy, he had soon been forsaken, both by him and Nature too, who could never have recovered her Strength and Vigour, without such mean and common Assistance,

(*a*) Nature cures Diseases. See *Hippocrates's* Notions as to this Point, related in the *History of Physick*, p. 273, 274. To which *Sydenham* likewise agrees.

as by a less prudent Person might have been rejected and despised. A second Objection, which I believe has been a great Hindrance in the Tryals of this Medicine, is its gentle and slow Action; especially if we consider the Date of its Use, which was during the time of the hot Regimen being in Vogue. For this being but of a moderate Warmth and Activity, and much slower in its Motion or Operation than some others, would be soon laid aside for those that were much quicker, and seemingly more certain in their Effect; a great many of which may be found. But this is really nevertheless one of the greatest Excellencies of this Medicine (as I have before shewn) to be slow, and yet certain and good in its Effect. But there is one Objection still, that is perhaps the only real one against it; which is, that we cannot always make this Medicine take place; and very often when we have the greatest Occasion for it, it must fail us; not only because several Persons have an unconquerable Aversion to one of the Ingredients, *viz.* the Oil; but because there is such a Disorder in the Stomach of many at this time, as causes it to refuse or throw up any such thick, clogging and disagreeable Medicine, as this seems in the whole Composition to be. I would nevertheless not have it rejected upon that account; but at least have that slight Remedy (or something like it, first us'd) which is prescribed in the Receipt for this Disorder or Squeamishness of the Stomach, with whatever other an innocent Industry may furnish to prevent the one, and make the other take effect. But I would not have that forcible Method made use of, which *Sydenham* p. 74. recommends in another Case, lest we procure the highest Danger and Injury to the Patient in this, and even that which he so much condemns p. 287, and elsewhere. But I would

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would rather have this, and all other inward Medicines laid aside in this Case, especially if the Person be very young, and a Tryal made of what by accident only happen'd to one of Mrs. *Buck's* Family, (the same good Gentlewoman I before mention'd at Page 4.)

C A S E X.

THE Case was this. A Child of Mrs. *Buck's* (of what Age I was not inform'd, nor is it material to be very exact) falling ill of the Small Pox, was seiz'd with such a Disturbance in its Bowels, that it did nothing but handle those Parts with its Fingers. But Mrs. *Buck* not judging by this, or any other Symptoms, that it would have the Small Pox, thought it might be troubled with Worms, and so presently apply'd a common Plaister made only of Mithridate and Aloes, to the Pit of the Child's Stomach, first bathing the Part for some time with the Juices of Rue and Wormwood mix'd. This was laid on at Night; and the next Morning the Child appear'd in good Order, and eas'd of its Trouble or Pain. But she observ'd, that it seem'd to have an itching, and scratch'd often upon that Part where the Plaister lay, which caus'd her to remove it: when to her great Surprize she found the Small Pox come out, and as thick as they could well stick all over the Place; scarce any at the same time appearing either in the Face, or the other Parts of the Body. What would be the Event of this Accident she knew not; but she only took care of him her self after a common Method, and he receiv'd no Damage, but went through the Distemper very well; nor had any Marks of it afterwards, either upon his Body or his Face, which latter indeed could not be damag'd, being scarce at all touch'd by them.

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THE first thing I think fit to remark upon this Case is, That here the Distemper was brought out by Art or Accident, without any inward Medicine given for the Purpose, which sometimes cannot be admitted of, but upon very hazardous Conditions. For either they must be very high Cordials of themselves, that are given at the time of such a great Disorder of the Stomach; or there must be a Dioporesis or Sweating rais'd before hand, by the Warmth of the Bedcloaths, before these can be retained in the Stomach. The Injury of both which are not only express'd in one Page of *Sydenham*, but in a great many others enforc'd and explain'd by him. A second thing to be observ'd is, That tho' here was something of a Violence us'd to Nature, in diverting her from her ordinary Course, yet it seems to be no more than what she will very well bear. And tho' the Eruption happen'd all upon one Part, yet it was without Damage to it. Nor ought we to apprehend any for the future, if we consider, that the Plague it self is evacuated even by Nature after the same Manner, and upon or near the same Place. But besides, we ought in this Case to expect very great Advantages. For, *First*, The Throat, which is a very dangerous Part for the Small Pox to fix in, is here secur'd, by the Distemper being drawn and settled lower than that Part. *Secondly*, The whole Face, Eyes, &c. are preserved likewise very well from any Damage, by the Distemper not touching them, as I have said. And Lastly, The whole Body in general must receive an Advantage by this Method, if we can credit our excellent and well experienc'd *Sydenham* upon the Point. For he tells us, *p.* 82, 83. 'You must take notice that this Disease is not to be esteem'd dangerous, because the Body is full of the

the Small Pox, but by reason of the Number of them in the Face. For if that be very full, tho' there be few, and those very distinct too in the rest of the Body; yet the Sick is in as much Danger, as if every Member were crouded with them. And on the contrary, tho' the Trunk and Members are very full, if there be but few in the Face there is less Danger. And what has been said of their Number, may likewise be affirm'd of the Kind of them; for the Face plainly indicates whether they are mild or otherwise.

By this it plainly appears, that the only dangerous Part of the whole Body for them to come out in, is the Face; and that from the other Parts of the Body, however thick beset, can proceed no Damage or Danger, either to a part or the whole. The Reasons of which I shall endeavour to give my Reader.

And first we ought to consider this part, *viz.* the Face, as the only one of the Body, that is constantly expos'd to the Air, and the Injuries both of heat and cold: and this of Necessity must be, even to the most delicate, curious, or effeminate Person breathing. We likewise know, that there is a greater conflux both of the Blood and Spirits to the Face of most Persons, as appears not only by that Fire in the Eyes, especially upon any Passion, but by the more florid or sanguine Colour impress'd upon the Face always than upon any other part of the Body. And 'tis generally observ'd, that the higher and fresher this Colour is in the Face of any one, the more dangerous this Distemper of the Small Pox proves to such a Person, tho' this Prognostick I judge is not infallible, by reason of the many good or ill Accidents that happen unobserv'd to a great many in this Distemper, and upon which
the

the whole Fate of it may yet depend. Allowing these things then to be true for the most part, the chief Seat of the Distemper will be very often fix'd here, where (as I have before said) naturally the greatest conflux of the Blood and Spirits is. But 'tis highly inconvenient notwithstanding, that this should be the Seat or Place of it; not only for the danger of those very precious Parts, the Eyes, but because in any part of it the Humours cannot be concocted so well as in the other Members or Parts, by reason that the outward surface of the Skin being something harder (even of those that are the most curious and careful of it) and likewise being depriv'd of Covering, which the other Parts may have without any Inconvenience when this may not, the natural and necessary Transpiration is impeded in it; and so the Pustules do not ripen either so soon, or so well here, as in other Parts: which is Matter of Fact, and well enough known. For which Reason, when there is a great Number of them, and they are of a small and bad Kind (which are longest in ripening) they not only leave those permanent Marks (as almost any long and bad Sore is apt to do) but are dangerous to the Welfare of the whole Body. For upon the approach of the secondary Feaver, which *Sydenham* tells us (a) is caus'd by a Resorption or drawing in of the corrupt Humours of the Imposthumes in general into the Blood, this part, viz. the Face, must furnish not only a greater quantity of Matter, but that of a more crude, corrosive and acrimonious Quality too than any or all the other Parts put together can do, for the Reasons I have just now given.

(a) Page 276, 441, 443.

AND from hence it appears, how very useful a Work this of Diversion or Revulsion might be, were it cultivated or improv'd by Physicians, or such as have the Power and Opportunity of practising it at this time, in their Hands. But the further Use and even Necessity of such a Method as this, will appear by a Passage in *Sydenham*, p. 282. where he tells us, 'That in the Case of Childrens falling in-
' to Fits before the Eruption of the Small Pox, we
' must use Blistering, Cordials, a warm Regimen,
' Opiates, &c. to cast out the Disease powerfully :
' which is the only way to save the Lives of many.
But had *Sydenham* but even once experimented, that there was a safer and better way than all those put together, for bringing out the Small Pox ; and likewise one that was a better and more speedy Cure for those Fits, whether symptomatical, as caus'd by this Distemper, or otherwise, he would never have given us such a Prescription, so directly contrary to all his own Principles and Practice, both before and after in his Works ; and which has given such a Latitude to incautious or unskilful Practitioners, to use the same Regimen now upon slighter and less dangerous Cases ; so as to overturn the very Foundation of his System, that was so well built for Practice before. This I could give several Instances in, (besides my own which I have mention'd p. 1. &c.)

BUT to return to the Matter in hand, which is, the Curing of these Fits, which *Sydenham* tells us are so dangerous. 'Tis plain that they cease after the bringing out of the Small Pox ; and this Remedy I have prescribed is sufficient for that Purpose, and to do it too with the utmost Safety, Benefit and Advantage, as I have shew'd. But supposing these Fits should not be caus'd by the Small Pox,

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Pox, as 'tis often dubious, but be caus'd by a Disorder of the Nerves and Spirits, Vitioufness of the Juices, Worms, &c. which are all very frequent in Children; this in the two last is certainly a good Remedy, and in the first not improper; considering that it must at least give a Diversion to the Spirits. This Medicine consisting of warm, cherishing and active Ingredients, and what Effects a topical Application only of mere warmth almost will have in curbing, reducing, or changing the enormous or impetuous Motions of the Spirits, *Sydenham* has given us an Instance, by his Prescription in the Iliac Passion, p. 34. l. 37. And I have been credibly inform'd, by a Person who had often try'd it, that in those Fits especially which are attended with voiding of a green porraceous Matter upwards, the Entrails of a young Dog, taken out very speedily and applied warm to the Stomach, is an instant Cure. Which agrees well with what *Sydenham* has said of those Fits, p. 309. concerning that particular Appearance of green Matter, &c. and with what has been before related concerning the Iliac Passion. Nor ought we too much to impute these things to Sympathy, or any specifick Quality, more than a mere natural or kindly Warmth in the said Entrails of a Dog. For that it may be done by the foremention'd Plaster, I once had a Tryal upon a Goldsmith's Child in *Stone-gate, York*: Which after several Medicines had been us'd to no purpose, and it seem'd to be in a desperate Case, it was reliev'd by this only Application, and recover'd, tho' nothing of the Small Pox appear'd. And so mean a Remedy as this may seem, by reason of the Commonness of it; I have heard *Seignior Vigany*, the Professor of Chymistry in *Cambridge*, affirm in a Lecture upon the *Materia medica*

medica, That he had known a Child laid out for dead, and yet has been reviv'd and recover'd by only anointing it upon the Regions of the Stomach and Bowels with Oil of Aloes. And considering how many excellent Medicines, both outward and inward, this is the Foundation and Basis of, I think it ought by no means to be despis'd. Nor is that other Ingredient (*viz.* the Mithridate) to be rejected perhaps; but only that excessive and preposterous Use of it laid aside, that *Sydenham* mentions p. 96. Nevertheless I do not insist upon the sole Use of these, but of any thing else that may produce the foremention'd Effect; for which, I am persuaded, we cannot be destitute of a great many things, that may both suit the Purpose and Design of it very well; and yet be agreeable to the Fancy or Humour of the Patient, the Bystanders or Prescribers; all whose Censures and Prejudices I expect to meet with against this altogether new and uncommon Advice of mine: Which therefore I ought to clear from some Objections at least.

AND first there is one thing that arises in the very next Page to that I directed my Reader to of *Sydenham's*, *viz.* 282. which may seem to abate, tho' not destroy the Validity of what I have been urging. Page 283. he tells us by way of Mitigation for this hazardous, tho' seeming necessary Advice, That the Small Pox that seize young Children with a Convulsion are favourable, and seldom flux much, &c. I should be very cautious in contradicting *Sydenham* in any thing; yet I cannot but declare, that I believe many fatal Accidents have happened by too great a Reliance upon this very Passage; the Sense of which at least ought to be restrain'd, and either to be understood, when Nature is left to her self, or when a cautious and

gentle Remedy is us'd only to assist her. I shall give one Example still living; which tho' it be of an adult or grown up Person, is not from our Purpose (this Prognostick being the same both for Infants and Adults, as will appear from *Morton*; tho' this Symptom does not so often happen to the latter.)

C A S E X I.

A young Woman, whose Maiden Name was *Gregory*, but now married to one *Hill* a Stay-maker, her Parents living in *Daker-street, Westminster*, where I lodg'd for some time, was, as I am inform'd, of a very beautiful both Form and Complexion, till the Age of Fifteen; when she fell ill of the Small Pox; and her Mother design'd to manage her herself, as she had done her other Children: but finding Convulsions come very thick upon her, she was at a loss, and resolv'd to take Advice for her Daughter. And a Person of Experience was sent for, who immediately determining both what her Distemper was, and the Cause of this Disorder, namely, the Small Pox lying in the Blood and not coming out, presently prescribes a Cordial which produced them all very soon, and she was at ease; her Mother thinking her in a fine way for Recovery: but the Event was contrary. For after a short Space, the Fever, Flux, and other Disorders, began to increase violently (as is usual in such a Case) and her Mother was oblig'd to send for more Advice for her, but all in vain; for she was given over by them. Nevertheless, by the abundant Care of her own, and the Encouragement of her Neighbours, she by Miracle, as her Mother thought it, recover'd; but is so much alter'd, that the very Figure of her Face, as they tell me, is not the same, as well as the Skin of it; which latter appears perfectly rough with

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the innumerable small Pits or Scars. So that those who have the Curiosity, and will but credit their own Eye-sight, may easily be convinc'd, that none ever flux'd more than this Person who was seiz'd with violent Convulsions before them; and that neither this Symptom (tho' reckoned one of the best Tokens or Prognosticks in the Distemper, both by *Sydenham* and (a) *Morton*) nor any other perhaps is Proof against an ill Management in this Distemper: Tho' a peculiar Constitution to bear high Cordials better than ordinary, or a particular Grossness, Coldness or Flegmatickness of the Blood, may sometimes be Proof against their ill Effects, and may make them sometimes, tho' very rarely, necessary and useful in the beginning. But yet I think we may much better and safer substitute another Method, namely that which I have been treating of, in their room, which cannot be liable to those apparent Hazards, for the Reasons before mentioned.

A second Objection is, That all topical Medicines hitherto apply'd, on purpose for removing the Small Pox out of the Face into other Parts of the Body, have prov'd either ineffectual or fatal. This I do believe is true enough: But then we ought to consider, that those Medicines were cold and repellent, and that they were apply'd to that very Part (*viz.* the Face) and very often after the Small Pox were actually fix'd and settled in it. But here every Circumstance is directly contrary. For *First*, The Medicine it self is not of a cold Quality, but warm, digestive and concoctive. *Secondly*, 'Tis not apply'd to the Face, but to a Part remote enough from it. And *Thirdly*, Its Design

(a) *Morton de variolis*, p. 160. and *Hist.* 12, 16.

is not to repel the Small Pox inwards, but to attract them outward; and that before they have appear'd or fix'd any where, in order to place them where they may be most convenient for their ripening and coming to their full Perfection in due time, and not too slowly, as we have Reason to believe they do in that other Part mention'd (*viz.* the Face.) All which things are most convenient and agreeable both to Nature and Reason; as has been already shew'd, and will be more fully hereafter.

BUT first another piece of an Objection must be answered, *viz.* That this Method can only be of use to Children, whose Skin is more tender and penetrable by outward Medicines. I grant that it is most proper for Children, but yet deny, that it is either improper or impracticable for others. For we see daily, that things apply'd outwardly upon People of the most robust and firmest Texture, both of the Muscles and outward Skin, have yet an inward Effect; and that very common Plaisters, and which are of no excessive Violence or Force, apply'd to the Stomach or Chest, frequently produce a breaking out of that Distemper they were apply'd for, in Heats or Pimples under them, in grown up Persons (of both Sexes) as well as Children. And why should we not expect it in this Disease, especially at this time of it, when the Blood is already prepared for such a Discharge, and that Nature only wants a little Help, Determination or Direction for the thing. And considering how very easie, dubious, or rather ductile she is then, I can scarce forbear wondering, that no Person has endeavour'd at this Method of Attraction, and cannot impute it to any thing else, but an Opinion of the Dangerfulness of this Distemper's fixing violently

lently upon any Part: whereas we have prov'd both from Reason one very clear Experiment already, and the best Authority, *viz.* *Sydenham's*, That there cannot possibly be any Danger, but by their fixing in the Face only, or at least very near it, *viz.* the Throat. The Easiness of Nature to follow any Direction at this time of the Distemper, *viz.* near the Eruption, will appear not only by those many Instances of her wavering State, *viz.* by their coming out sometimes, and afterwards retreating again, not only for Hours, but Days, and afterwards returning, yet with Safety to the Patient: but by the Examples of some who have had them come out pretty full at first upon a particular Part, and yet they have removed and retreated from thence, and gone mostly to another, seemingly of their own accord. A remarkable Instance of which I shall give.

C A S E XII.

Mr. Chubnal, of Oundle in Northamptonshire, at the Age of about Forty, of a fresh Complexion and a pretty full and athletick habit of Body, happen'd to fall ill of the Small Pox the last Year 1713. They were observ'd at their first coming out to be pretty numerous in his Face: but upon his walking about in his Chamber for some time the first Day, he felt on a suddain a Pain in his Feet, which grew so uneasy, as to make him desirous to go to Bed. 'Twas observ'd by those Persons in his Chamber at the same time, that the Small Pox retreated or withdrew most of them from his Face inwards; and upon examining his Feet, upon account of the foremention'd Pain, they appear'd just fresh coming out, and very numerous in those Parts (which is reckon'd even by the common Nurses as a good Sign in this Distemper.) Whether this was caus'd by

by his forementioned Exercise of Walking, I wholly leave the Reader to judge. The matter of Fact however was as I related it: and all his Friends from the Favourableness and Mildness of his Distemper were in Hopes of a good Issue of it; tho' his something improper Age for this Distemper, gross Habit of Body, and Custom of drinking pretty much, were ill-boding Circumstances, and indeed were almost certain Tokens of his Ruin. For he obstinately confining himself now in his Sickness, to a low Dyet, and the drinking of Whey, as I was inform'd (whereas he should have been allow'd more generous Liquors, especially being accustomed to them) he fail'd all their Expectations, and dy'd towards the Height of them. And no wonder, since *Morton* has given us many Instances of the like Fault or Failure by too cool a Regimen, even in favourable Kinds of the Pox, which is generally inconvenient in the Progress of the Distemper, and not always advisable in the Beginning; as I have shew'd from Page 49 to 51.

CASE XIII. *But the most extraordinary Case I have met with, or heard of in this Nature, is of one Elizabeth Kent, who was Servant to that Physician of Spalding, which I have already taken notice of, when the Small Pox were very raging there in the Year 1711.*

This Servant Maid happen'd to be subject to Boils. That Year she had one about a Month before her taking the Small Pox, and another began to breed in her Side just when she fell ill of them. Her Symptoms of the Small Pox were such as were usual; and the Doctor apprehending what her Distemper would be, remov'd her out of his House, because he would not have the Distemper go thro'

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his Family. He visited her however. And on the second or third Day the Small Pox appear'd a little; which, as the Girl herself said to me, went in again: but the next Day the Doctor himself saw a great Number of them within the Skin; which, according to both their Descriptions, were of the (a) mixt Kind; some large and some very small. The Doctor however did not give her any thing that he told me of to force them out, expecting they would have proceeded well of their own accord; the Maid being strong and hearty. But on the sudden she felt a most violent and almost intollerable Pain in her Side, in the place where her Boil was breeding: the Small Pox at the same Instant all disappearing again, and they never return'd or came into sight any more after it: but the forementioned Sore continu'd extreamly vexatious. So that the Doctor put her into the Hand of a Surgeon of the same Town, who cur'd her very well of it; but it discharg'd a larger quantity of Corruption (as the Patient herself assur'd me) than any of her other Boils: one of which she had about a Month after this Illness. And 'tis the Opinion of the said Doctor, who gave me a Sight and Examination of this Maiden, that the Small Pox were by this Accident prevented in her by a Metastasis or Translation of the Matter of them, from the whole Superficies of the Body, to this particular Part where the Sore before-mentioned bred, which was the occasion of its being both large and troublesome, tho' not dangerous, as was prov'd by the Event. Nor are those Sores of the Plague at all so, as Sydenham and others assure us.

(a) *Variola media* of Morton.

TO these Matters of Fact I shall subjoin a very vulgar Observation, or Notion rather, concerning what is commonly call'd the Master Pock; which, tho' I believe there is really no such thing in the Sense or Notion that commonly goes of it (not one in twenty that has had the Distemper having any such remarkable Pit or Scar to show) yet there seems to be this in it: That if a Person has had any Weakness in a particular Part, any accidental small Sore, Inflammation or Contusion; the Humours flowing more to that Part, shall often cause (if it be in the Face especially) a deeper Scar, or Scars in that Place, than in others. And this Notion of mine, I believe upon a nice Enquiry would be supported by Matter of Fact. And one Instance I shall give is of my Eldest Brother, *John Lynn*, who happen'd to have the Small Pox about the Age of two and twenty, which were favourable, and left hardly any Misfigurment; yet he had one very remarkable deep Hole or Pit in his Forehead, which he himself us'd to say, was occasion'd by his having a large Heat or Carbuncle accidentally upon that very Spot, when he was taken ill. And this went always for the Master Pock; and was indeed occasion'd by them: but not without the other's Assistance in the making of it, or at least in drawing the Matter thither for it.

AND I remember in my own particular Illness, that after I was recover'd so far as to rise from my Bed, I fell lame, as several others have done (*a*), that have had them violently. But it was something remarkable, that one of my Feet was all along swelled, and pain'd me twice as much as the other;

(*a*) Vid. *Syd.* pag. 103.

which I can impute to no other Reason, than my having receiv'd a violent Bruise by the Kick of an Horse upon the Ankle formerly, which had made it always something weaker than the other, and apt to have a Pain in it sometimes upon long walking, or extraordinary change of Weather: But thus much of the Matter Pock, which I take to be only an accidental Mark, and produc'd commonly by such Occasions, or a Weakness, a slight blow or brush upon the Eye, where it is sometimes said to light and cause Blindness; tho' this Misfortune is much oftner caus'd by Mismanagement in or after the Distemper, than otherwise.

THERE is one thing still I cannot but mention (while we are upon this Subject of Revulsion) that has been try'd in Surgery, (*viz.*) that when a very fresh Tumour or Inflammation has happen'd upon a Part where it might be highly dangerous, or very difficult to cure, Applications have been made by Art to raise another painful Tumour or Inflammation not far distant from the former; which has not only deadn'd or (*a*) obscur'd the Sense of Pain in the former, but quite cur'd it too; Nature detaching all her Forces of Blood, Spirits and Humours for the Relief of this latter, and (*b*) abating the fresh-created (but more violent) Pain, as it should seem, while the other dangerous Part has been preserv'd and secur'd by this means; which is very applicable to our Purpose, especially to the two last Experiments or Cases, *pag.* 69, &c. and will help to shew us with those other Arguments that precede them, that both Nature, Reason, Acci-

(*a*) *Duobus doloribus simul obortis, non in eodem loco vehementior obscurat alterum.* Hipp. Sect. 2. Aph. 48.

(*b*) See Sir William Temple of the Gour.

dents, the best Authority, and Art do all concur to encourage us in this Matter. And I only wish my own particular Experience might have gone more along with them; but being deny'd that Satisfaction, for want of Means hitherto, even to make one single Tryal (partly for those Reasons I have mention'd in my Preface) I have thought this the properest Method to put others upon those things that may be a common Benefit, more than my own private Advantage any way.

I shall however venture to give some Rules for the Management of this thing, now I have shew'd pretty plainly the Use of it: And first, I would not have it done too hastily, upon a very early and slight Symptom only appearing; for nothing is more common than for this Distemper to be mistaken for others, or others for it in the beginning, as we have already had some Instances even in this small Treatise, and innumerable others may be met with. But I would have this or any other Application deferr'd till the second Day at least; when if the Symptoms be very urgent and violent, it may be applied in the Evening, in order to the bringing out the Small Pox the next Morning: which is the usual Season or Time for the confluent sort (according to *Sydenham*, and for either kind according to *Morton*) to appear in. But if the Symptoms be less urgent, *viz.* more gentle and mild, or with great Intermissions, tho' the Suspicion be never so apparent of this Distemper, it may be deferr'd still longer, as may any other Medicine. For we need not fear a Danger (except the Symptoms be very violent and urgent according to *Sydenham*, or else an ill Regimen, *viz.* a very forcible and hot one be us'd, or we be too pertinacious in a cold one according to *Morton*, or else over busie in unnecessary

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Evacuations (a) which both condemn). But when 'tis most proper, which I take to be either on the second or third Evening at farthest, I would have it apply'd in order to produce the Effects mention'd pag. 59, 60, 61, &c. and that the following Rules be observ'd. First, that the Fomentation or Bathing mention'd pag. 59. or something like it, be us'd a little warm'd before the Application be made. Or if this won't be admitted, that we chafe the Pit of the Stomach, either with a warm Hand, a Woollen Cloth, or a Flesh Brush for some time; for so the Pores will not only be opened, but by this means the Blood and Spirits the more easily determined towards that part we design, and the subsequent Operation be the surer of taking Effect; then we should take care that this Plaister (of whatever warm Ingredients 'tis made, and being likewise a little warm'd for the cherishing of the Part) should be as large as may be conveniently for our Purpose, to the end, that the Small Pox may have room enough a great many of them to come out upon. For there is no danger of an over-burthen here, as I have shew'd pag. 61. but rather of having too few, and that another Part should suffer, which would be more dangerous to the whole. Lastly, we should be througly careful that the Patient has no high Cordials or sweating Medicines given him, either any time before, or at the Season of applying this; not only for the Reasons Sydenham has given against them, but because they are too apt to drive the Blood and Spirits up into the Head and Face, and by that Means often fix the Distemper there, even beyond the Power of this or any other Me-

(a) See Syd. general Notions as to Evacuations, p. 89. and Morton's p. 124.

thod to recall it, or even repel it from thence; as, I question not, has been sufficiently experimented. These things are, I think, all of them highly necessary to be observ'd; and if I could yet further prevail upon such Persons as have for the most part the management of the Distemper, at this time of it, in their Hands; it should be to lay aside those unnecessary Preparations (as they are call'd) of Bleeding, Vomiting, Purging, Blistering, &c. which are generally not only of no apparent Use or Necessity, but are really detrimental for the most part to those that use them in the beginning of this Distemper. I shall set down some of the vulgar Opinions concerning them, and both shew their Mistakes and the Dangerousness of them.

AND *First* for Bleeding. Besides that Opinion or Design of it, that I have mention'd, Page 5. &c. which I believe is not a very common one; the vulgar Notion in general is, That this Distemper being attended with a Fever, nothing is more proper to abate it than Bleeding in the beginning. But whoever tries it shall often find that he runs a double Hazard in this Point; when either contrary to his Expectation, he shall find the Fever rais'd upon it, (as I have shew'd Page 10.) or if the Fever does in a manner vanish, very often a Diaphoresis [or Sweating] attends the Patient at the same time, which is no good Symptom, especially upon any Weakness, as this Evacuation may endanger to cause to the Patient: Tho' upon an Addition of Strength and Spirits, and a good and laudable Coction of the Blood and Humours, it may be good; (as I have shew'd from *Sydenham*, &c. Page 32. of this Work) and even in this Distemper be innocent at least. Tho' a perfect *Apexia* [or Absence of the Fever] at this time of it is no certain
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good Sign. For it will infallibly return, if the Small Pox be numerous; and Nature is the more likely to use this Instrument of hers to her own (a) Destruction, for being depriv'd of it at such a time as it should be serviceable to her, namely, in the Beginning; as I not only experimented my self, being free enough from a Feaver the first two Days after the Eruption, and yet had a severe one afterwards; but the like most frequently happens when there has been too great a Force upon Nature, by Cordials or otherwise, as was my Case.

A Second Intent of Bleeding, is for bringing out the Small Pox. And this I'll allow does sometimes hasten their Eruption; yet if it be done at random, and where there is nothing of a Plethora [or Fulness of Blood] that requires it, 'tis wholly unnecessary, and may be dangerous. For if the Small Pox are already form'd in the Blood, and just coming forth of their own accord, this Withdrawing of the Blood and Humours too much from the Circumference to the Center, may cause a Resorption, Confusion or Mixture of them again into the whole Mass, and so even hinder their ever coming out at all; which I fear has been the Case too often, when this has been us'd unseasonably. But if Bleeding should be us'd more early where it is not necessary (which I think it hardly ever is, excepting only in a Plethora [or very great Fulness of Blood] for the most part, or in some particular and more violent hot Sorts of the Pox, and where such a Regimen as Sydenham has us'd, p. 169. is proper) excepting these Cases, I say, 'tis still as noxious a Method. For if the Small Pox be not yet form'd in the Blood, Nature will be put upon too precipitate

(a) Syd. pag. 277, 278.

a Motion (a), besides her being depriv'd of Matter for a regular Digestion and Formation of them; and so they will be thrown out sooner perhaps, but crude, small and numerous, which will produce a foul Spectacle in a short time, and full of Danger every Way. If it be still urg'd, That *Sydenham* has us'd Bleeding both at the beginning, and at all other times of this Distemper, I will not dispute the Privilege that *Sydenham*, or any other Physician of Reputation, may take when they see an apparent Cause from Symptoms that are urgent, and that plainly indicate a thing; but that he made it a certain and invariable Maxim to begin with it, I must absolutely deny. And one of those Reasons which he sometimes gives for it, viz. for hindring the too great Assimilation of the variolous or pocky Ferment, *Sydenham* frankly confesses in one of his last Tracts, that it did not answer that Intention; but that there was more Danger of it after Bleeding, than before. See Page 275. from Line 28. to 40. So that 'tis not Bleeding, but a proper Regimen or Medicine that must secure this Point for the most part: and, in all common Cases at least, that which I have mention'd Page 53. is as likely to have this good Effect, as any other perhaps that can be nam'd, for the Reasons that I have given both before and after it.

WHAT other common Arguments there are for this Method of Blood-letting, I shall not search out at present, but proceed to the next, which is Vomiting.

AND this is look'd upon vulgarly as so very necessary, and withal so safe a Preparation in almost any Distemper, that when a Person is advis'd to it,

(a) *Syd.* 89.

and seems but to demurr or dispute a little whether he may venture upon it or not (especially being uncertain as to his Distemper) he has his Answer given him generally, That this can do no harm. And such an Answer was, I must own, impos'd upon me, when I was wholly ignorant of my Distemper, and the Consequences which I found afterwards. But I shall now consider some of them a little. And first for their Arguments.

'Tis alledg'd generally, that in this Distemper there is a great Inclination to vomit; and *Sydenham* tells us moreover, p. 16. That where there is such an Inclination in a Feaver, a Vomit ought, to be prescrib'd, to prevent the ill Consequences that happen, viz. a Looseness at the latter end of the Distemper of a Feaver, which here might be dangerous. This Plea, tho' set in the strongest Light, yet is really of no Force if we consider the following things, First, That *Sydenham* tells us in the same Page, This Consequence does not always follow, if the Distemper be an inflammatory or malignant one, as this most certainly is. And as he has nowhere imputed this Misfortune, whenever it does happen in this particular Distemper of the Small Pox, to the neglect of such a Preparation, we may venture to place it upon another score, namely, the same with the secondary Feaver. For when the Pustules are very numerous, so that they cover the whole Skin, and begin to grow crusty, hard and impenetrable (Transpiration being wholly stopp'd) no wonder that the Force of the Humours should be turn'd inwards, and cause a Looseness sometimes, which is not always prevented by a Vomit, to my own Knowledge, but is best cur'd then when it happens by Opiates, Cordials, and proper Astringents. But if we would have this

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Symptom absolutely prevented in the beginning, we must likewise prevent the Small Pox from being numerous then, which is not likely to be done very often by the foremention'd Means, as I shall presently shew. But first must answer more fully to the Point of humouring that Inclination to vomit, which I believe so much Stress is laid upon. 'Tis plain from *Sydenham* and other Authors, that this is not always an Indication for using this Medicine, but rather on the contrary, that we should appease such a Disorder of Nature by any other Means, as in a violent Cholick, the Stone, Hysterick Fits, a Blow over the Head, &c. which occasion this Symptom, and in which it would be look'd upon as Madness almost to administer a Vomit: and yet the present Case is nearer to a Parallel, for the most Part, than is vulgarly imagin'd. For 'tis certain that all these proceed commonly from one proximate Cause, namely, the Ataxia [or Disorder] of the Spirits, and not from the Viciousness of those Humours that are lodg'd in the Stomach only: Tho in this Distemper we are now upon, it has been look'd upon as otherwise, by reason that the Patient sometimes finds Relief by a Vomit.

I shall give a Solution of that only a Page or two farther. In the mean time I do affirm, that except a Person appears to be of a very gross Habit of Body, or else has had a clogging at his Stomach, with Loss of Appetite a pretty many Days, or Weeks rather, before this Illness happen'd; or else has taken an immediate Surfeit, there can be no Indications (from the foremention'd Symptom) for exhibiting a Vomit.

BUT that which will be look'd upon as the strongest Argument for this Custom of giving a Vomit,

Vomit, is, That *Sydenham* has not only us'd it, but has given us his Reasons for it, p. 284. namely, ' That when the Sickness at Stomach and other ' Symptoms are very violent, so that the Patient ' cannot refrain from his Bed (the Heat of which ' he tells us is injurious in the beginning) he orders Bleeding and a Vomit, which does not only ' expel the Matter that causes the unusual Sick- ' ness, but so refreshes the Patient, that being as ' it were well, he can keep from Bed, &c. Now by this Passage, so far of it at least, it might seem as if the Disorder lay wholly in the Stomach, and that being clear'd, not only Ease, but the greatest Benefit must necessarily follow to the Patient. Nevertheless he has not laid the whole Stress upon this Evacuation, but upon other things; as we find by pursuing the Paragraph through: and that it was chiefly Ease that he aim'd at by those two first things mention'd. We shall consider by what Means this is obtain'd by the latter of those, *viz.* Vomiting.

I should be very cautious of delivering my own Notions upon this Matter singly; but since I find them supported by others, and even in a Mathematical Way demonstrated to be true, I shall here give them the more freely. I need only for this purpose transcribe a Piece of a Paragraph of Dr. *Cheyne* of Feavers, which you may see in Mr. *Harri-*
ri's Lexicon; where most of the Accounts he gives of things, are suppos'd to be chosen from the best and most correct Authors. Vol. II. under the Word *Emetick*, towards the middle or latter End we have these Words transcrib'd from him. ' And ' the strong Contraction in so many Muscles and ' Muscular Canals, as are at Work in the Action ' of Vomiting, and the violent Concussion which ' is produced over the whole Body, by a Power
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which by a just Computation is not inferior to that of Twenty six Thousand Pound Weight (*a*), may and often does take away the Obstructions in many other Canals, besides those which are adjacent to the Stomach and Gullet; as we plainly see by those vast Sweats which plentiful Fits of Vomiting occasion.

Now we see first by this how forcible a Medicine a Vomit is, and in the next place, wherein a great part of its Power or Efficacy lies, namely, in opening all Obstructions, even of the remotest Canals of the Body, those of the Skin especially. What vast Sweats, as this Author tells us (and Experience often testifies) it causes. No wonder therefore it should occasion a seeming Solution or Disappearance of all Symptoms of this Distemper for a time, after it is over; as *Sydenham* has taken notice for us above; Which even a strong Sudorifick will sometimes do, if it has its proper Effect, and makes the Patient sweat plentifully. Which I can scarce forbear thinking is sometimes as harmless, if it be only continued as long, *viz*, an Hour, or less time. For all the Paroxysms or Fits of Sweating in a Vomit put together, do not amount to near that; and we may e'en almost as well venture upon the one of these Medicines, as the other in some Cases, if we pretend to an Advantage by either of them alone: Which *Sydenham*, we see in this very Place, did not; but has placed the Benefit mostly upon the Advantage of cool Air, and abstaining from Bed. See the same Page 285. Line 15, &c. Which our present Managers take no notice or care at all of, for the most part; and so not only render this Advice of his useless, but dangerous.

FOR

(*a*) All the Muscles of the Body are suppos'd to be strain'd and put in Motion by the Action of Vomiting.

FOR by putting the Patient to Bed immediately upon it, and prescribing, or at least permitting the Use of a Cordial and Anodine, after one excessive Sweating, another is immediately promoted; which is so violent, especially if it proves to be about the time of the Eruption of the Small Pox, that nothing but a Calenture, I believe, can exceed the heat of it, as I my self have experimented; and many others have felt the Injury of it, whom I forbear to name upon the account of those who prescrib'd this Remedy; who seem'd to have erred sometimes out of necessity of doing something; and taking this Advice of Sydenham's to be the safest, have mistaken the Authority they plead for it, and the Consequences that too often follow: For the mere Effects of the Malignity of the Distemper, when it has been wholly the Effect of Force used, and not the fault of Nature perhaps at all, who might have perform'd her own Work well enough, if Time only, or such a gentle and proper Assistance, as I have mention'd Page 59, 60, &c. had been allow'd her, and which has not the tenth Part of that Rigour and Violence which we see is here used, and to the most hazardous Purposes imaginable. For we not only run the Risque of very much increasing the Number of the Small Pox by these Means, namely, by the Vomit, Cordial or Anodine, and warm Bed too, all succeeding one another; but we are in Danger, by the first of these, of having them fix'd in the Face and Throat, especially if the Person be hard to vomit. For those Strainings force all the Blood and Spirits upwards, as is visible to any By-stander.

THERE are other Reasons for the Use of this Medicine, which will all be answer'd in the main by what I have already said. As one is for the giving

of this first, that other Medicines may afterwards take the better place; whereas I have shew'd, those that are in common Vogue, viz. strong Cordials, will take the worse place, as both my own Experience and Reason testifies. But if they mean more moderate Medicines, and such as are suitable to the carrying on a liesurely Concoction of the Pustules only, this Preparation before them will, generally speaking, not be at all necessary, except the Person be of a very gross Habit of Body indeed, and of a pituitous [or flegmatick] Constitution wholly. For some Quantity of those Humours is necessary in this Distemper, more than in any other perhaps, to curb the Heat and Fury of it, and to maintain a proper Fermentation in the Blood. For which see *Sydenham* at Page 44. And the very Essence of a natural Heat, if we may believe the Opinion of the Ancients ^(a) concerning it, consists in Blood and a pituitous Matter; either of which we should therefore be cautious of lessening without an apparent Cause, lest we by so doing deprive Nature of her very best Means and Power to save her self.

I should now say something of Purging; but this Preparation being much less us'd in the beginning, notwithstanding a Recommendation of *Sydenham's*, p. 279. it needs the less to be warn'd against. And some of the foregoing Arguments, and those to be found in *Sydenham* against Evacuations in general, will serve the turn. Their general Faults being, that they hinder the Concoction of the Humours, which ought to precede all Evacuations, both according to *Sydenham*, and *Hippocrates* before him, for the most part. As to that Passage in the for-

(a) Vide *Gallen de Hippocratis & Platonis decretis*, Lib. 8. c. 7. mer,

mer, viz. at Page 275. it is not of that Import, as to found any thing almost of Practice upon. For he speaks of this Evacuation, as a thing fit only to be done before the Patient's Blood is infected, that is, before he can positively tell, or perhaps any one for him, whether he shall have this Distemper or not. And by his mentioning it to be repeated, 'tis plain that it should be done very early too; otherwise there will not be time for several Tryals as he advises: So that should we allow this to be a good early Preparative, yet it can seldom be made use of, for the Reasons aforementioned.

A fourth thing which I would have laid aside for the most part in the beginning of this Distemper, is Blistering. For since those Fits in Children and others, which seem to require the Application of Blisters, may be remov'd both by a safer and much better way (as I have shew'd from Page 63, to 65.) There is no reason we should run the (a) Hazard of their disagreeing with a Patient's Constitution, and causing very ill Effects, or of the Torture they cause to almost every one, when we can avoid them both. Nevertheless, if the Patient be attended with a Sleepiness, and a very low and weak Pulse at the same time, these are certainly useful in the beginning.

I shall finish all these Arguments with one Observation more of our sincere and excellent Sydenham; who, after he has given us an whole perfect History almost of this Distemper, and the Way of managing it according to Nature's Dictates chiefly, tells us (b), 'By the way, it appears from what has

(a) See *Baglivy de usu & abusu Vesicantium.*

(b) *Syd.* p. 95.

been said, why so few of the common People die of this Disease, compar'd with the Rich that are kill'd by it; which indeed can hardly be ascrib'd to any other Cause, than that by reason of their Poverty, and Country Way of living, they have not Power to hurt themselves by a more accurate and delicate Regimen, &c.

Now what our Author chiefly introduces this for, namely, to discourage the too frequent use of rich and very high Cordials. The same Observation will serve as strongly to discouragement the too frequent and pernicious Use of all those things I have but lately mention'd. For, we can scarce suppose those poor (but fortunate People in comparison, when they fall into this Distemper) to have ever almost made use of them; but we may rather take it, that their whole Skill and Practice too lay in the prescribing and making of a Posset, or some such simple and plain Medicine, as I have mention'd and explain'd before, p. 53, 54, &c. which seems to have been of rustick or Country (but wholesome) Preparation at first, and which our over-niceness, and too great delicacy, more than real Faults of it, causes us to despise.

And thus I have from some new Matters of Fact, as well as old, and from Sydenham's Treatises, endeavour'd to search out and explain something more of the true Nature of this Distemper, in relation to what it will or will not bear in its Cure: And have propos'd such Methods as are suitable to this first Part of the Work (namely, the safe bringing out of the Small Pox) and to such Persons as are employ'd in it.

WHAT may be further proper for this, as also in some of those various Exigences of the Distemper afterwards (especially when any ill Regimen has

has been us'd) I must for some Reasons defer, and shall only at present give this wholesome Caution and Advice, that no Person be too negligent and secure, as to the Event of this Distemper, from any seeming good Appearances of it in the beginning. For there is no time of it wherein it may not be dangerous, either by Neglect or an ill Regimen afterwards.

I would therefore advise every one, at least that can afford it, not to want the Counsel of a sober, honest and well experienc'd Physician; not to prescribe often, but to watch and over-see the Patient, and to guide him thro' any Difficulties that may occur, which sometimes are very sudden and unlook'd for.

BUT to such who cannot afford this, I shall only give one small Advice, That they make use sometimes of what is recommended in the Receipt, pag. 53, &c. (yet with Caution and Prudence, not to promote a Sweating, or to force out violently the Distemper, but to maintain a natural Heat) for by this means, the farther Concoction or Maturation of the Humours (according to *Sydenham*) or the yet powerful and prevailing Malignity of the Distemper, and the Vacillation or failing of the Spirits (according to *Morton*) will be best provided for.

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